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Report of Committee of Seventeen

on the

Professional Preparation of High-
School Teachers

Advance print from Los Angeles Volume



July, 1907

REPORT
of the Committee of Seventeen
on the
Professional Preparation of High
School Teachers

Not Educ. Assoc. to the
Department of Secondary Education of the National
Education Association of the U. S.

AT THE MEETING AT
LOS ANGELES
JULY, 1907

Reg. M. Johnson
GIFT

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DEPARTMENT OF SECONDARY EDUCATION

REPORT OF THE COMMITTEE OF SEVENTEEN ON THE PROFESSIONAL PREPARATION OF HIGH-SCHOOL TEACHERS

INTRODUCTION

BY THE CHAIRMAN, REUBEN POST HALLECK

The Secondary Department of Education at the 1905 meeting at Asbury Park, N. J., voted that a committee be appointed by the president elected in 1905, Dr. E. W. Lyttle, New York state inspector of high schools, to consider the subject of securing proper professional preparation for high-school teachers. In accordance with this resolution, the following Committee of Seventeen was appointed.

REUBEN POST HALLECK, *chairman*, principal, Boys' High School, Louisville, Ky.

H. M. BARRETT, principal of high school, Pueblo, Colo.

FREDERICK E. BOLTON, professor of education, State University of Iowa.

STRATTON D. BROOKS, superintendent of schools, Boston, Mass.

J. STANLEY BROWN, superintendent of Joliet, Ill., Township High School.

EDWARD F. BUCHNER, professor of philosophy and education, University of Alabama.

JOHN W. COOK, president, Northern Illinois State Normal School.

E. P. CUBBERLY, professor of education, Leland Stanford Jr. University.

CHARLES DEGARMO, professor of science and art of education, Cornell University.

EDWIN G. DEXTER, professor of education, University of Illinois.

PAUL H. HANUS, professor of education, Harvard University.

E. O. HOLLAND, junior professor of education and high-school visitor, University of Indiana.

C. H. JUDD, professor of psychology, Yale University.

JOHN R. KIRK, president, Missouri State Normal School.

GEORGE W. A. LUCKEY, professor of Education, University of Nebraska.

GEORGE H. MARTIN, secretary, Massachusetts State Board of Education.

M. V. O'SHEA, professor of science and art of education, University of Wisconsin.

As chairman, I asked every member of this Committee of Seventeen to

prepare a paper dealing with some phase of this subject. Every one complied with this request. I am glad that the National Education Association will publish these papers in a separate pamphlet to be known as the "Report of the Committee of Seventeen on the Professional Preparation of High-School Teachers."

Because this subject is somewhat new, it was thought wise to have a large committee from all parts of the United States, representing high schools, normal schools, colleges, post-graduate departments of education, and superintendents. The majority of this committee have at some time been high-school teachers. Seven of the college professors on it were selected because they had actually taught in secondary schools and thus had first-hand experience with the practical necessities of the case. These men also have the added advantage of connection with university schools of education. They have for some time been considering what is ideal as well as what is practicable in the training of secondary teachers. Several other members of the committee, in addition to the two now connected with normal schools, were formerly normal-school teachers.

Some critics may object because the members of this committee do not agree on all points, but let such remember that exact agreement in regard to the professional training of high-school teachers is not necessary for progress, in fact, exact agreement would soon stop advancement. Precise delimitations of method will probably be sought by the pedant, the inefficient, and those who lack originality, but it is to be hoped that the day is far distant when cut-and-dried methods of the same type shall be imposed on the secondary teachers of this land. There may be—and there probably should be—agreement on certain cardinal points, but let it not be forgotten that one of the reasons why progress in the United States has astonished the world is because there has been freer play for individuality here than elsewhere.

Some repetition will naturally be found among so many papers, but even when the same point is discussed, the angle of view is frequently different. Some divergence of opinion and variation in the emphasis placed on certain subjects might have been expected from so many different types of educators. Naturally those expressions of opinion in regard to which all the members of this committee agree will carry the most weight. In order that readers might gain more definite impressions, it seemed wise to select and bring together certain cardinal points on which there is substantial agreement. To decide on these, the following members met in deliberative session at Chicago on February 28 and March 1, 1907: Messrs. Bolton, Brooks, Brown, Buchner, Cook, DeGarmo, Dexter, Judd, Kirk, Luckey, O'Shea, and the chairman.

After much discussion, a brief document was prepared, to be known as the "Recommendations of the Committee of Seventeen on the Professional Preparation of High-School Teachers," and to be signed by all the members of the committee. These recommendations, which follow this paper, are the result of a conference which respected whatever conflicting views the members held

and which incorporated only those opinions in which all who were present could concur. While these recommendations leave out some things which several would have liked to see inserted, it is, nevertheless, felt that they represent a distinct advance over existing conditions. It was further agreed that additional opinions and matters on which the members of the committee could not agree would receive sufficient prominence in the individual papers following these recommendations. Every member who was at the Chicago conference agreed to these recommendations without dissent. Three of the members who were absent dissented on certain minor points, noted in connection with their names.

The chairman in this individual report wishes to emphasize what seems to him to be salient points. He is willing to concede that his views are influenced by his personal equation as an active high-school principal.

There was an Elizabethan stage, which could present Shakspeare's plays, because, more than a century previous, certain towns had rules like this to determine who should act in the miracle plays:—

All such as they shall find sufficient in person and cunning, to the honor of the City and worship of the said Crafts, for to admit and able; and all other insufficient persons, either in voice or person, to discharge, ammove, and avoide.

The twentieth century must find some means "to discharge, ammove, and avoide" all persons who would make "insufficient" teachers, or the profession of high-school teaching will never rise to Elizabethan greatness. Possibly schools of education might do some of their best work in acting as a sieve. Every year there are many persons desirous of getting positions in high schools whom all the professional schools of education in this country could not fashion into successful teachers. The great schools of art get rid of many would-be artists. Professors of education, while not infallible, can often tell that certain personalities could not succeed in the high school. It would be a great act of kindness to many to weed out such. There would be joy among untold adolescents, if schools of education would act as a sort of St. Peter to bar the gate against all the manifestly unfit who think they have a "call" or who proposed to break in uncalled.

1.* No matter what branch the high-school instructor is to teach, he ought to know the groundwork of psychology and its educational applications. Probably three-quarters of the psychology taught in many universities would be about as directly serviceable to a teacher as a fifth wheel to a coach. Human minds, nevertheless, do not work in a lawless way. It is just as necessary for efficient trainers of the mind to know its laws as for an electrical engineer to be familiar with the laws which electricity obeys, before he attempts to instal a plant. The civil engineer who deals with certain materials spends a long time studying their resistance. He does not build his bridge first and then ascertain the qualities of his materials. He learns all that he can before

*The numerals thruout all the papers mark those paragraphs referred to specifically in the "Joint Recommendations."

he starts his bridge. In the same way, the high-school teacher ought to learn certain things thoroly about psychology before he even begins to teach. This is the most important single study in the professional training of the high-school teacher. As an Irishman might say, it is not so much psychology that the teacher wants, as it is educational psychology. This is something of a blanket term, but it includes any deductions or suggestions, helpful to the teacher, which can be drawn from the main stream of psychology or from any of its branches or subdivisions, no matter whether genetic, experimental, adolescent, physiological, animal, or morbid psychology.

Some eminent psychologists are not very apt at showing the applications of their subject in practical education. It is scarcely more than a quarter of a century ago that an authority in electricity in one of our great universities said that the electrical current could never be so subdivided as to make it practical for lighting small rooms. Like some psychologists, he was too busy investigating and theorizing to stop to make practical applications of his knowledge. When such an application is made, it usually is, like all truths of greatest worth so self-evident as to render a formal statement of the process almost offensive to the theorizer.

Since there has been some skepticism recently shown in certain quarters about the utility of psychology in this connection, it may perhaps not be unwise here to point out a few ways in which psychology may be made serviceable to the secondary teacher. In the first place, the gateway to teaching pupils is by means of a nervous mechanism. Teachers ought to have a clear working knowledge of this mechanism; of its sensory and motor neurones, and their development, its associative tracts, the division of labor in the brain, the laws of neural fatigue, recuperation, and nutrition. They ought to realize that knowledge of all kinds, at the last analysis, rests upon a definite neural disposition, that Shakspeare's daffodils would mean nothing if there had been no previous modification of nerve cells due to sensory stimuli from the flower. The fact that the nervous system grows to the mode in which it is exercised ought to be something more than an empty expression. In short, the writer feels that teachers ought to have some such working conception of physiological psychology, as he has tried to give in his *Education of the Central Nervous System*.¹ The high-school teacher will then be the better able to perform one of his important functions—that of teaching first-year pupils how to study. Book study is unnatural, and the more thinking it requires, the more unnatural it is. For untold ages, man was trained by making thought responses to sensory and motor stimuli or to the vivid imaginative recall of such stimuli. Many a boy drops out of the high school because he has never learned how to concentrate his mind on Latin or algebra. The first step in teaching him how to study by himself consists in giving him some faint dilution of the old sensory and motor stimuli to which the brains of his progenitors were accustomed. These stimuli will be like the scaffolding employed

¹ The Macmillan Co., New York.

in building a house, and they may later be dispensed with. If a boy studying his Latin forms is given a lead pencil and asked to write them out, a new stimulus is applied to two different parts of his brain. The motor tract concerned in writing is set in action and the black marks appeal visually to the occipital lobe. If he repeats the forms aloud, the speech center in the third frontal convolution and the auditory center in the temporal lobe are stimulated. Such stimuli help to anchor his attention and enable him to continue at his task. Some knowledge of physiological psychology is needed to afford intelligent guidance and to furnish philosophical explanation for insistence on certain methods.

Experimental psychology has filled many pages with matter useless to the teacher, yet it has given to pedagogy a number of facts of great value. For instance, no teacher can use the time of pupils economically unless he knows the saving in interrupted repetitions in learning certain things. Experimental psychology has shown that the number of consecutive repetitions necessary for mastery in certain cases is far greater than when these repetitions are separated by a certain interval of time, and that 40 per cent. of time and energy may sometimes be saved by not insisting on absolute mastery at one attack.

Further experiment has shown that the central nervous system has peculiar laws of its own in showing progressive stages of acquired adaptation and skill. The pupil climbs the stairs rapidly for awhile with some new acquisition, then there is a long landing where he remains on a dead level, while the teacher grows discouraged and scolds and perhaps disheartens the pupil. Then there is another rapid ascent, followed by another horizontal plane. A knowledge of such laws in neural development would make more effective teachers and happier pupils.

It is time that a new term was coined in educational psychology, the "psychology of difficulty." If teachers were grounded in this branch, they would be less often swept off their balance by "easy" methods and tasks. The psychology of difficulty tells us that what is popularly known as the "easiest" road between two places is seldom the best psychological road, that while a straight line is the shortest geometrical distance between two points, such a line is seldom the shortest psychological distance. Experimental psychology showed us long ago that consciousness, like the greatest captains of industry, whose hours are precious, saves its time and energy by erecting about itself certain barriers which interfere with any straight line access. Many stimuli from light and sound and odor are not allowed to cross the "threshold of attention." Effective attention can be secured only by strong stimuli. The day that it ceased to protect itself against weaklings, its efficiency would cease. The most of us have to be told a thing vigorously in three different ways and then knocked down by experience before we really learn a new truth.

Psychologists promptly called attention to the fact that it is not the spelling

of the hardest words which is most often forgotten. "Chicago" and "knowledge" will be misspelled less often than "confectionery" and "separate" because the human mind will not put forth its strongest prehensile powers except when confronted with a difficulty. The Anglo-Saxon race did not develop under tropical skies with easy problems. The difficulties in the way of settling New England may even at this distance cause tender hearts to ache, but climates and subjects may be too "easy." The Spanish language is very easily spelled and learned with comparatively small effort, and this brings us to the arithmetical problem: "If we find one Shakspeare using a hard language like the English, how many should we find using the Spanish language, only one-third as hard?" High-school teachers need to learn that Anglo-Saxon adolescents do not like easy things. They prefer football to marbles, to the intense astonishment of tropical races.

Many high-school teachers make themselves and their principals a vast amount of extra work in discipline and also fail to get the best results because they do not know the psychology of suggestion. It is usual to call persons fools who, after an accident with a weapon, claim that they did not know that it was loaded. Ideas, like firearms, are loaded, the ideas more often than the firearms. For a teacher, the best practical working definition of an idea is "a hint to do something." To emphasize the importance of suggestion, teachers should learn something of hypnotism. So far as manipulating suggestive ideas is concerned, every teacher of adolescents must learn to be something of a hypnotist. People of individuality, who leave their impress on those around them are always suggestive. The psychological relation between suggestion and initiative is of the closest kind.

The modern proverb, "If you don't see what you want, want what you see," brings us to another point of educational psychology, important for the secondary teacher. Certain teachers and salesmen are gifted at making pupils and customers want what they see. Such are worth their weight in gold. Psychology gives us the conditions of making people want what they see. We study these conditions, variously labeled as the psychology of interest or of feeling. The psychology of imagination and of thinking are also necessary in this same process, while the psychology of will conditions all else for the educator.

2. A study of apperception, or of that process under some other synonymous name, ought to furnish a philosophical reason why the high-school teacher should not be merely a narrow specialist, but a person of broad culture. We see things not as the things are, but as we are. If we are narrow we shall see great things small; we shall see only a microscopic section of the pupil's life and interests; and we shall magnify our petty specialty out of all proportion to its relation to many-sided life. We must be broadly educated so that we can determine the educational value of the different studies and know what instruments of learning to employ in order to introduce richness and harmony and avoid discord in the educational orchestra. The

high-school teacher, above all, needs to be responsive to all those influences which give variety to life, which quicken the imagination, which bring him into sympathetic touch with the lives of others. You cannot send the whole child to school, unless the whole teacher has gone to school. Any training which binds with dwarfish hands even the sweet influence of the Pleiades on his life will render him a less-inspiring teacher. He is dealing with those who are looking forward to a wonderful voyage of discovery to a new western world. He furnishes the incentive to that voyage; he superintends the preparation for it. In power to make or mar, he is only a little lower than the angels.

Finally, a careful study of educational psychology will help high-school teachers to form independent judgments when confronted with some new method or proposition and will further enable them to make valuable suggestions to teachers in the grades and to parents. A high-school instructor in English, for instance, finds that his pupils come to him such bad spellers as to be unable to get a good business position. When he complains, he is told by the graded teachers that scientific experiments have shown that those grades which have no specific instruction in spelling send out as good spellers as come from schools where spelling is a daily set task. He starts to ascertain the facts and finds that such has proved the case in a city where a few schools from the entire number omitted specific drill in spelling and taught it only incidentally for a few years. If he has been grounded in scientific method—and *every high-school teacher should be grounded in rigorous scientific method as a part of his indispensable professional preparation*—he soon notes that it is impossible for him to estimate certain factors accurately. Did the novelty of the situation in those special schools arouse every teacher to pay far more attention to the spelling of words which came up naturally, no matter in what branch or connection? Did every teacher feel more intensely that the children of those special schools must not be allowed to fall behind in comparison with other schools? Did the new situation make the parents feel that added responsibility was thrust upon them? Would the state of affairs have been precisely the same if the entire city had abandoned specific spelling lessons, if there had been no rivalry, and if the novelty had completely worn away?

He soon realizes that it is impossible to answer these questions with absolute accuracy, but his educational psychology has taught him to recognize whatever advantage there is in this claim and to be on his guard against expecting results in conflict with mental laws. While general psychology has taught him that repetition is one of the chief foundation stones of memory, educational psychology has indelibly impressed on him the more important fact that energy in the mental state is far more effective in securing memory than mere uninterested, somnolent repetition, and that interest is not only one of the indispensable factors of energy, but that interest is the divine mother of all world-compelling energy. He has learned theoretically what usually happens when an educational gunner fires at a mark outside of the range of interest, and he sees spelling, as a rule, taught in a perfunctory way. Even theoretical educational psychol-

ogy will teach him that interest and enthusiasm are as catching as smallpox, catching even in spelling, if a live teacher, who has breathed the breath of life into his pupils, has them spell only live words. He then is thoroughly competent to say that some *may* teach spelling incidentally far better than others from a specific list. His knowledge of psychology and of scientific method forbids him to make a more sweeping statement which might lead some astray. Such high-school teachers have been known to change the attitude of an entire city in the teaching of English, by insisting on the simple law of energy and interest—that a child should spell when there was something to spell, talk when there was something to say, write when there was something to communicate, and that the teacher should be responsible for providing the interest and the occasion, just as an intelligent parent succeeded in getting two of the laziest boys in the city to clear his garden of stones, by putting in the corner a mark at which they could throw. Other teachers have little fuss and feathers with Latin or modern language forms after a few months, because these teachers know and apply the psychological truth that energy and interest are natural qualities in a mental state when dealing with *new* matter, as well as with anything demanded by the present logical necessities of the case. Those teachers who let the golden time of novelty pass without utilizing to the utmost the mental energy then liberated are like the landsman who waited to sail his boat out of the harbor until after the breeze had died away. The teacher grounded in modern educational psychology will have an advantage over the one who discovers the right method through experience alone. He will know why and when to do a certain thing and not stumble blindly on the right process. In short, increased efficiency and leadership may be expected from the high-school teacher who has made a thoughtful study of educational psychology, accompanied by training in scientific method.

Professional training is strictly not concerned with the subject-matter, as mere original information, but only with that matter from the point of view of the high-school teacher, or more strictly still, from the point of view of the high-school pupil.

3. This difference between a knowledge of the subject-matter and the recasting it to fit the pupil's mind, however self-evident it must seem to every psychologist, is not yet generally appreciated by high-school teachers or their college instructors. This difference is as great as the difference between a side of leather in a wholesale store and a part of that same leather cut out by a skilful shoemaker to fit a certain person's foot. "Knowledge is knowledge," says the university specialist. "All that is necessary is to give the high-school teacher plenty of knowledge and his pupils will get it." Yards of silk are yards of silk. All that is necessary is for a woman to give her dressmaker plenty of goods and a dress will be forthcoming. Why, then, will women gladly pay certain dressmakers three times as much as others to make up precisely the same dress pattern? Such a question would seem childish to every woman who has had "trouble with her dressmaker." This question

would seem more childish in this connection if it was not for the fact that so many university professors are today claiming that knowledge is the prime requisite, that other things will take care of themselves.

4. The first necessity for the high-school teacher is, of course, ample knowledge. If he is to teach Latin, for instance, he should be a better teacher for studying it four years in a high school and four years in college. A teacher in the academic department of a high school should not only have a degree from a reputable college, but he should also have given special study to any subject which he expects to teach. If no absolute number of years can be assigned for subjects as various as Latin, bookkeeping, and manual training, the teacher specialist should be guided by the general rule that he ought to study his branch until he can survey it as a whole, keep in mind at one time its parts, decide what may be omitted without detriment, and have confidence in his own opinion on any points raised in connection with his subject. Without such a mastery, it ought not to be possible for a high-school teacher to get a certificate. His certificate should be issued only for those special subjects in which he has adequate scholarship.

5. Every high-school teacher ought to have a definite course in recasting his subject from the pupil's point of view. A Ph.D. may chafe at having to learn his subject over under such restrictions, but why should he chafe any more than a plumber, who comes to your home with an ample supply of pipe and joints which do not fit, chafes at being sent back to the shop for suitable material? Why should the Ph.D. not expect to submit to the same earthly laws which every successful tailor, farmer, cook, and manufacturer must obey? The teacher must fit the pupil's mind. Misfit knowledge discourages the pupil, perplexes him, and frequently causes him to stop school. High-school teachers have often been heard to repeat precisely the same explanation four or five times to a wretched pupil, making no attempt to find a different route into his mind, or to lodge the fact there by slow stages, resting patiently on successive landings.

This point of working over one's store of knowledge so that it can be intelligently communicated to the pupil and assimilated by him is as important as getting that knowledge in the first place. Universities and schools of education ought, for a while at least, until the full importance of such a distinction is recognized, to keep sharply separate those courses which give new information to the student and those which teach him how to adapt to growing minds the information which he already has.

5a. There are two practical ways that may be employed in training high-school teachers to acquire their specialty a second time from the learner's point of view. The first, which should be used in every case, is to have professors of education who can take the pupil's point of view and become children again, just for that course. The candidate should then be required to present the subject-matter under those limitations. For successful results, professors of education must be found who are capable of taking the adol-

escent's point of view, men who are not desiccated, who have their own youth well in memory, and who subject their own methods to the touchstone of that memory. Such men will instruct the future high-school teacher to see how much he can possibly omit from every textbook, without impairing its logical sequence, and how much he needs to add to make that sequence comprehensible and vivid to pupils. The teacher should realize that the author of every secondary textbook is swayed, consciously or unconsciously, by what adult critics will say of its completeness and logical methods, and that there will consequently be introduced matter beyond the comprehension of the average high-school student. The teacher must learn to note and reject this adult matter.

5b. He should also be taught to repeat to himself with all reverence this prayer every morning before he enters the high-school room: "Give me this day sufficient sense and sympathy to realize that what appears to me easy, logical sequence, only because I am a specialist in that branch, may seem absolutely meaningless jargon to an adolescent. Make me to feel that one taste of victory over high-school subject-matter is worth a hundred defeats, yea, that victory and hope and continuance in school are adolescent synonyms, and that a general's fame is not built on the defeat of his troops. Teach me to be less wise in my own conceit and give me the social grace to realize that if I am to travel in the golden clime of adolescence, I must at least learn the language of that country and avoid what may seem to its inhabitants a barbaric tongue. Bestow on me the saving grace of humor sufficient to keep me from over-stressing any point and from becoming shrill. Grant me also the capacity to be as easily bored as the children of that rapidly changing land of spring-time. And, finally, enable me every day to look through the eyes of adolescence at a new world bathed in a light that never was on land or sea, Amen."

6. The second method consists in giving candidates what our medical friends call "hospital practice" on actual adolescents. For the sake of the children, previous preparation should reduce to the least possible minimum the evils necessarily resulting from such a course. Some such practice is indispensable. This may be had (1) in a secondary school maintained by a university for that special purpose; (2) in the schools in the town or city in which the university is situated; (3) in distant high schools. For a careful study of what is actually being accomplished by the first two methods, Professor Dexter's excellent paper should be read. The third method has for some time been employed in an increasing degree during the last few years by superintendents and high-school principals all over the country. These inexperienced teachers are watched, advised, and given a chance as often as possible to visit the classrooms of the best teachers in the school. The majority of those who have had experience in secondary schools would probably agree that practice in teaching in the grades would not take the place of experience in the high school, and that the two schools must differ widely in methods. A study of the psychology of adolescence should make this point plain. The papers of Messrs. Barrett,

Bolton, Cook, DeGarmo, Kirk, and Martin will show some divergence of opinion.

7. In this connection, however, we should note that there can be no dispute about the truth that a high-school teacher's academic and professional training should be conditioned largely by the special subjects which he is to teach, and that practice in teaching Latin would not make a skilful teacher of physics.

Pedagogical hospital practice for teachers of adolescents, in some form or other, is as old as Adam. It is yet in its infancy in systematic scientific application in the training of secondary teachers. The next ten years will probably show what special secondary training-schools can and cannot accomplish. The members of this committee regret that these schools are not farther evolved at this time, and that the data based solely on practice in conducting them is at present so limited.

8. Every prospective high-school teacher should be encouraged to spend at least one post-graduate year in some university school of education, engaged in professional preparation for teaching. Where this is not possible, at least one-eighth of his under-graduate work should be devoted to such professional branches. This recommendation was submitted for criticism by a high-school principal to a group of twenty excellent men, all of them experienced high-school teachers.

"Is this rule for men or for women?" sixteen of them asked.

"For both," was the reply.

"Well, this rule would have disposed of us," replied the sixteen, "for none of us intended to become teachers early enough to shape our college course in conformity with such requirements. If we had been compelled to take a post-graduate year, we should have done something else."

Their principal shifted uneasily in his chair, for he realized that among those sixteen men there were enough born teachers to make a reputation for almost any school. It may be true that comparatively few of the many born teachers ever enter the profession of teaching, even under the easiest requirements. Careful investigation should determine whether these same easy requirements do not drive out the fit teachers, under a sort of pedagogical Gresham's law, that a legalized cheap instrument, to be used on other people, will drive out a dearer instrument, in the same way that a debt will be paid in the cheaper money, if two standards are in circulation.

It is plain that in the case of men, such a rule should not be passed, unless as some of us think, it would be a step toward making high-school teaching as much of a profession as either law or medicine and as well rewarded. Even these desiderata would not be sufficient to tempt the best men unless their tenure of office was certain, unless they could have freedom for their different individualities, and escape the apron strings of too much supervision.

Many first-class women might conform to stringent requirements only because fewer ways of earning a living are open to them. It is certainly not the wish of this committee to suggest requirements which would keep the best

men from becoming high-school teachers. In Germany the secondary teacher must have eighteen years of preliminary study and practice; three years in the primary school, nine in the gymnasium, three in the university, one in passing the state examinations, one in the seminary, and one in trial teaching. Even then there are generally two applicants for every place, but there is no competition on the part of women.¹ The caste system in Germany is such, the population so dense, the opportunity of rising in varied ways so few, that the young men of the United States cannot be expected to be willing to follow Germany as a pattern.

Every secondary-school teacher ought to have as a part of his regular professional training either a course under a library expert or under someone capable of giving instruction in recommending general reading for adolescents. The future teacher should learn the point of view of different types of adolescents and be able to suggest books interesting to them all in all branches. No teacher ought to receive a high-school certificate unless he is able to recommend stimulating and interesting books on subjects as various as astronomy, inventions, history, animals, literature, adventure, poetry, flowers, Indians, and travel. He should know better than his pedagogy books like *The Prince and the Pauper*, *The Jungle Book*, *The Oregon Trail*, *Astronomy with an Opera Glass*, *Tenting on the Plains*, *The Bar Sinister*, *Lives of the Hunted*, *Hero Tales from American History*, and suitable poetry selected from a wide range. Boys and girls have, in the majority of cases, decided before leaving their teens what the bulk of the reading for the rest of their lives shall be, in fact, whether they shall read anything except novels. Librarians say that the majority of all reading is done by young people before twenty. The experience of the world, its joys and sorrow, are bequeathed to us thru books. By them, Shakspeare, being dead, yet speaketh. Woe to the boy or girl who leaves the high school without a taste for reading. Every decade or so sees the hours of the laborer shortened. What shall he do with his spare time? This becomes a question of increasing importance. The saloon, the poolroom, and the card-table will have less attractions for the one whose teachers have given him a love for reading. The teacher who has not made a special study of reading for adolescents cannot do his best in implanting such a love. Unless he supplements this special training during each subsequent year of his teaching-life by reading at the very least three adolescent books, he will gradually lose both the capacity and the inclination to direct the outside reading of his pupils.

9. The professional training of the high-school teacher ought to show him the best methods of character-building, of establishing our boys and girls on firm moral foundations. More than anything else, this should be made the subject of scientific study. The teacher should investigate the neural basis of habit, and its relation to morality of the higher type. He should learn why

¹ Professor DeGarmo's paper (No. XV) on "The Professional Training of Teachers for the Secondary Schools of Germany" should be read in this connection.

"character," "regularity," and "thoronsness" are largely synonymous terms. He should be taught how to select noble ideals from history, literature, and the life around him. He should know the tremendous power of suggestion for morality and immorality. He should learn what appeals especially to adolescents and he should skilfully plan to enlist their interests, their likes and dislikes on the side of morality. Some of the great masters of secondary schools have kept their pupils marching to the music of noble ideals until that way of marching has become a habit. The state certainly has a right to demand that, in return for the vast outlay for secondary education, the pupils shall come out of school with higher moral ideals than when they entered. Ethics and sociology should be taught together. A knowledge of what is ethical should be put in immediate practice in doing something for one's neighbor. If it is important that the academic knowledge of the high-school teacher should be recast and revised so as to render it capable of being assimilated by the minds of his pupils, it is far more important that everything connected with the high-school curriculum should be scientifically studied from the point of view of its effect on character. Such study has already proceeded far enough to prove that we have often put the greatest emphasis where it least belongs. During the next twenty-five years it is to be hoped that the scientific study of education will show vast progress in giving practical directions for building moral foundations which will withstand the floods of temptation and also show more forcibly that intellectual foundations alone are but sand. The nation is now demanding this of its educators more than ever before. There are already signs of progress in this direction, but practical ethics does not yet rest on as firm a scientific foundation as the intellectual processes in building bridges or improved methods in teaching chemistry.

10. For lack of space, a few additional points which the professional training of the high-school teacher should emphasize must be compressed into one paragraph. The candidate should learn something of school administration, since he must work with others and be a part of the commonwealth. He should know something of the evolution of the secondary school and also the evolution of the methods of teaching his own special branch. He should be able to orient the work of the entire school and to have a clear idea of what a well-rounded secondary school should accomplish. He should be able to weigh judicially the claims of both the so-called cultural and vocational subjects. He should read some educational classics and biographies of the great educators and catch from them on the personal side greater enthusiasm for his profession. He should recognize the importance of being thoro, the dangers of superficiality, "sight-reading," and of too hasty inference or shrewd guesswork. To this end he should have careful training in some one science, grow to respect scientific method, and learn that character and thoro-ness are closely related.

The chairman would emphasize the importance of reading all the papers which follow. This is necessary to obtain a well-rounded view, for no single

member of this committee has attempted to treat all the points involved in this comparatively new subject. The chairman desires to thank all the members of this committee for the interest which they have taken in this question and the hard work which they have given to it. He wishes specially to thank Messrs. Brooks, Dexter, and DeGarmo, who, with himself, were members of a preliminary executive committee. This executive committee read all of the papers, compared the points made, and studied for some time how best to frame a set of "Recommendations," sufficiently unified, it is hoped, to leave a clear impression on the mind of the reader. Without the unusually efficient work of these three men, the following "Recommendations" would never have taken such simple shape. The drudgery which they cheerfully consented to undergo to present something definite, as well as something acceptable to all the members, may not appear on the surface, but it was certainly drudgery. The chairman wishes further to thank Superintendent Brooks for suggesting, making, and verifying the numerical references in the "Recommendations" which follow:

To Dr. E. W. Lyttle, state inspector of high schools for New York and president of the Department of Secondary Education, 1905-07, the thanks of everyone interested in this subject are due. His zeal in the field of secondary education, his familiarity with it on both the theoretical and the practical side, and his sympathy with the work of this committee, which he appointed, made his suggestions and counsel invaluable to the chairman. Dr. Lyttle certainly can point to work done by the Department of Secondary Education under his leadership.

JOINT-RECOMMENDATIONS OF THE COMMITTEE OF SEVENTEEN ON THE PROFESSIONAL PREPARATION OF HIGH-SCHOOL TEACHERS

The committee on the preparation of high-school teachers recommend:

I. That the academic preparation include the following elements:

A. A detailed and specialized study of the subjects to be taught.

The program of studies selected by each student should include work in subjects outside of those in which he is making special preparation, sufficient to give some insight into the different fields of knowledge and to avoid the dangers of over-specialization.

¹ Barrett, 2, 3; Brooks, 2; Brown, 2; Cubberley, 2; Halleck, 2, 4; Holland, 3; Hanus, 2, 3, 4; Judd, 3; Luckey, 8; O'Shea, 3.

B. One or more subjects from a group including history, economics, and sociology, which will give the teacher a proper outlook upon the social aspects of education.

Barrett, 6; Brooks, 4; Martin, 6; O'Shea, 4.

C. A course in general psychology and at least one from a group of subjects including history of philosophy, logics, and ethics, which will give the teacher a proper outlook upon education as the development of the individual.

¹ The references are to the paragraph numbers in the papers of this Committee. Only those paragraphs are numbered which fall under the heads given in these joint "Recommendations." Failure to number a paragraph does not imply that it is not important.

Bolton, IV, 2; Brooks, 11; DeGarmo, 4; Halleck, 1, 9; Hanus, 3; Judd, 5a; Martin, 6; O'Shea, 4.

II. That definite study be given to each of the following subjects, either in separate courses or in such combinations as convenience or necessity demands:

A. History of Education.

1. History of general education.

2. History of secondary education.

Barrett, 5; Bolton, IV, 2; Brooks, 4; Cubberley, 3; DeGarmo, 3; Halleck, 1, 10; Hanus, 6, 7; Holland, 3; Judd, 4; Luckey, 6; Martin, 7; O'Shea, 4.

B. Educational psychology with emphasis on adolescence.

Barrett, 6, 8; Brooks, 5; DeGarmo, 4; Halleck, 1, 5a, 5b; Hanus, 5, 8; Holland, 3; Luckey, 6; Cubberley, 3; Martin, 2, 3; O'Shea, 4.

C. The principles of education, including the study of educational aims, values, and processes. Courses in general method are included under this heading.

Barrett, 7, 10; Bolton, IV, 2; Brooks, 6, 7; DeGarmo, 1; Hanus, 4, 5, 8; Holland, 3; Judd, 5a; Luckey, 6; Martin, 2, 5; O'Shea, 4.

D. Special methods in the secondary school subjects that the students expect to teach.

Barrett, 12; Brooks, 8; Buchner, 3; DeGarmo, 2; Halleck, 3, 5, 7; Hanus, 4a, 4c; O'Shea, 3.

E. Organization and management of schools and school systems.

Bolton, IV, 2; Brooks, 9; Halleck, 10; Hanus, 8; Holland, 3; Luckey, 6; Martin, 3; O'Shea, 4.

F. School hygiene.

Brooks, 10; Hanus, 8; Holland, 3.

III. That opportunity for observation and practice teaching with secondary pupils be given.

The committee recognizes the difficulties involved in this recommendation, but believes that they are not insurmountable. Each of the following plans has proved successful in some instances:

A. The maintenance of a school of secondary-school grade that may be used for observation and practice.

B. Affiliation with public or private high schools so situated geographically that practice teaching can be done without interfering with the other work of the college course.

In addition to the above, the committee suggests that where competent critical supervision is possible, cadet teaching, in schools more remotely situated, may be attempted. In such cases, a teacher's diploma might be granted after a year's successful work as a cadet teacher.

Barrett, 10, 11; Bolton, IV, 2; Brooks, 12; Buchner, 1, 4; DeGarmo, 5; Halleck, 6; Hanus, 4c, 8; Holland, 2; Luckey, 6; Martin, 8; O'Shea, 5, 5a.

IV. That the minimum requirement for a secondary-school teacher be graduation from a college maintaining a four-year course and requiring four years' high-school work for admission, or from an institution having equivalent requirements for admission and giving equivalent academic scholarship.

A year of graduate work divided between academic and professional subjects is desirable. Discussions of the relative value of college and normal schools as training-schools for secondary-school teachers, are to be found in the references below:

Barrett, 6; Bolton, II, IV, 1; Brooks, 3; Buchner, 3; Cook, Entire paper; Halleck, 4, 8; Judd, 3; Kirk, Entire paper; Luckey, 2, 7; Cubberley, 1; Martin, 9; O'Shea, 4a.

V. That the study of subjects mentioned under II be distributed thru the last two years of the college course.

The proportional amount of time given to these subjects will vary with local conditions, but an irreducible minimum is one-eighth of the college course. They should be preceded or accompanied by the subjects mentioned in I, B, C. Recommendations as to the amount of time given to particular courses will be found in several of the accompanying papers.

Bolton, IV, 2; Brooks, 12; Hanus, 3; Luckey, 4; O'Shea, 4a.

Papers dealing with special topics have not been given paragraph numbers and are not included in the references above. They are as follows:

FREDERICK E. BOLTON

I. Requirements for High-School Certificates. II. The University and the College as Training-Schools for High-School Teachers. III. Standards in Germany. IV. Standards Suggested for American Schools.

EDWARD F. BUCHNER

The Professional Preparation of High-School Teachers in the Fifteen Southern States.

JOHN W. COOK

Capacity and Limitations of the Normal School in the Professional Preparation of the High-School Teachers.

CHARLES DE GARMO

Professional Training of Teachers for the Secondary Schools of Germany.

EDWIN G. DEXTER

The Present Training of Teachers for Secondary Schools.

J. R. KIRK

Will the Same Training in the Normal School Serve to Prepare the Teacher for Both Elementary and High-School Work?

Signed,

REUBEN POST HALLECK

STRATTON D. BROOKS

JOHN W. COOK

EDWIN G. DEXTER

C. H. JUDD

H. M. BARRETT

J. STANLEY BROWN

¹ E. P. CUBBERLEY

² PAUL H. HANUS

JOHN R. KIRK

FREDERICK E. BOLTON

EDWARD F. BUCHNER

CHARLES DE GARMO

E. O. HOLLAND

GEORGE W. A. LUCKEY

³ GEORGE H. MARTIN

M. VINCENT O'SHEA

A SHORT COURSE OF PROFESSIONAL READING FOR HIGH-SCHOOL TEACHERS

Requests for suggestions for professional reading have been received from high-school teachers who cannot stop their work to go to schools of education

¹ Is not positive about making mandatory the history of philosophy, logic, and ethics.

² "Dissents from the seemingly unqualified opinion that all the studies under II should necessarily form a part of the prospective teacher's *undergraduate* study."

³ Questions Number V.

or who cannot remain in these schools a sufficient length of time. It is one of the encouraging signs of the times to note the increasing number of high-school teachers who wish, in so far as is possible, both to remedy deficiencies in their professional training and also to grow in their profession. A brief list of books for this purpose is accordingly given. In the preparation of this list the chairman has had valuable assistance from a number of members of this committee, but no one member except himself is responsible for the list as a whole. While several books by members of this committee appear below, it should be understood that such books were in every case suggested by other members of this committee.

The brevity of this list should add to its value. Before the teacher has read very far, other books and references will be suggested to him and he will of his own accord search for a more elaborate treatment of certain topics. What the majority of teachers need is a start among the bewildering multiplicity of works on education. Where shall we begin? is a question which they frequently ask.

These books are recommended to teachers who are doing any branch of secondary educational work, no matter whether it is academic, arts and crafts, manual training, or commercial.

PSYCHOLOGY, GENERAL METHOD, AND PHILOSOPHY OF EDUCATION

James, *Talks to Teachers on Psychology*, also parts of his two-volume work on psychology (Henry Holt & Co.).

Judd, *Genetic Psychology for Teachers* (D. Appleton & Co.).

Halleck, *Education of the Central Nervous System* (The Macmillan Co.).

Thorndike, *Principles of Teaching Based on Psychology* (A. G. Seiler).

Adams, *Herbartian Psychology Applied to Education* (D. C. Heath & Co.).

Halleck, *Psychology and Psychic Culture* (American Book Co.).

Horne, *Psychological Principles of Education* (Macmillan).

Le Bon, *The Crowd: A Study of the Popular Mind* (Macmillan).

Galton, *Inquiries into Human Faculty* ("Everyman's Library" 1907, E. P. Dutton Co.).

Hall, *Adolescence, Its Psychology*, 2 vols., 1,373 pages. The one-volume edition, 379 pages, published under the title, *Youth: Its Education, Regimen, and Hygiene* (Appleton) will suffice for the average reader.

Bagley, *The Educative Process* (Macmillan).

McMurry, *Method of the Recitation* (Macmillan).

Hanus, *Educational Aims and Educational Values* (Macmillan).

O'Shea, *Education as Adjustment* (Longmans, Green & Co.).

Hanus, *A Modern School* (Macmillan).

O'Shea, *Dynamic Factors in Education* (Macmillan).

SPECIAL METHOD

DeGarmo, *Principles of Secondary Education* (Macmillan).

Vol. I, "The Studies;" Vol. II, "Educational Processes."

Bagster-Collins, *Teaching of German in Secondary Schools* (Macmillan).

Bennett and Bristol, *The Teaching of Latin and Greek in the Secondary School* (Longmans, Green & Co.).

- Carpenter, Baker, and Scott, *The Teaching of English in the Elementary and Secondary School* (Macmillan).
- Chubb, *The Teaching of English in the Elementary and Secondary School* (Macmillan).
- Smith and Hall, *The Teaching of Chemistry and Physics in the Secondary School* (Longmans, Green & Co.).
- Lloyd and Bigelow, *The Teaching of Biology in the Secondary School* (Longmans, Green & Co.).
- Smith, D. E., *The Teaching of Elementary Mathematics* (Macmillan).
- Young, *The Teaching of Mathematics* (Longmans, Green & Co.).
- Bourne, *The Teaching of History and Civics in the Elementary and the Secondary School* (Longmans, Green & Co.).
- *The Study of History in Schools*, Report to the American Historical Association, by the Committee of Seven, 267 pages (Macmillan).
- Report of the New England History Teachers' Association, 299 pages (Macmillan).
- Richards, *Manual Training* (Longmans, Green & Co.).

HISTORICAL AND DESCRIPTIVE, UNITED STATES AND GERMANY

- Brown, *The Making of Our Middle Schools* (Longmans, Green & Co.).
- Dexter, *History of Education in the United States* (Macmillan).
- Luckey, *The Professional Training of Secondary Teachers in the United States* (Macmillan).
- Bolton, *The Secondary School System of Germany* (Appleton).
- Russell, *German Higher Schools* (Longmans, Green & Co.).
- Paulsen, *German Universities* (Charles Scribner's Sons).

GENERAL HISTORY OF EDUCATION AND EDUCATIONAL CLASSICS

- Monroe, *Textbook in the History of Education*, 772 pages (Macmillan).
- Davidson, *History of Education*, 292 pages (Scribner).
- Bosanquet, *Education of the Young in Plato's Republic*, 198 pages (Cambridge University Press).
- Bryan, *Plato, the Teacher*, 454 pages (Scribner).
- Davidson, *Aristotle and Ancient Educational Ideals*, 256 pages (Scribner).
- Ascham, *Scholemaster*, 317 pages (D. C. Heath & Co.).
- Woodward, *Vittorino da Feltrre and Other Humanist Educators*, 261 pages (Cambridge University Press).
- Locke, *Thoughts on Education*, edited by Quick, 240 pages (Cambridge University Press).
- Rousseau, *Emile* (abridged edition, D. C. Heath & Co.).
- Herbart, *Outlines of Educational Doctrine*, edited by Lange and DeGarmo, 334 pages (Macmillan).
- Spencer, *Education*, 285 pages (Appleton).
- Painter, *Great Pedagogical Essays*, 426 pages (selections from twenty-six classics; American Book Co.).

ETHICS AND SOCIOLOGY

- Adler, *Moral Instruction of Children*, 278 pages (Appleton).
- MacCunn, *The Making of Character: Some Educational Aspects of Ethics*, 226 pages (Macmillan).
- Griggs, *Moral Education*, 352 pages (B. W. Huebsch, publisher, New York).
- Sidgwick, *On Stimulus* (Cambridge University Press).
- Forbush, *The Boy Problem: A Study in Social Pedagogy*, 194 pages (The Pilgrim Press Boston).
- Dewey, *The School and Society*, 129 pages (The University of Chicago Press).

Patten, *New Basis of Civilization*, 220 pages (Macmillan).

Giddings, *Elements of Sociology*, 353 pages (Macmillan).

American Journal of Sociology.

BOOKS HELPFUL TO TEACHERS IN RECOMMENDING SUITABLE READING TO HIGH-SCHOOL PUPILS

Hewins, *Books for Boys and Girls*, 56 pages (American Library Association, 34 Newbury Street, Boston).

Children's Reading: A Catalogue Compiled for the Home Libraries and Reading Clubs, Conducted by the Children's Department of the Carnegie Library of Pittsburg, 110 pages (American Library Association, 34 Newbury Street, Boston).

Field, *Fingerposts to Children's Reading*, 276 pages (A. C. McClurg & Co., Chicago).

Colby, *Literature and Life in School*, 229 pages (Houghton Mifflin Co.).

Griswold, *A Descriptive List of Books for the Young*, large 8vo, 175 pages (W. M. Griswold, publisher, Cambridge, Mass.).

Hanna, "One Hundred Books of Unqualified Value for High-School Students to Read"—published in the 1899 volume of the *Proceedings* of the National Educational Association, pp. 486, 487. This list is also included in a separate volume of eighty pages, known as *Report of the Committee on the Relation of Public Libraries to the Public Schools*, published by the National Educational Association, Winona, Minn.

Hall, "Youth," chap. viii, pp. 141-206, *Biographies of Youth* (Appleton).

Aldrich, *Story of a Bad Boy* (Houghton, Mifflin & Co.).

Bashkirtseff, Marie, *Journal of a Young Artist* (Rand, McNally & Co., Chicago).

Howells, William D., *Heroines of Fiction*, 2 vols., 513 pages (Harper & Bros.).

Richardson, *Choice of Books* (David McKay, Philadelphia).

EDUCATIONAL PERIODICALS

The School Review (especially devoted to secondary education) should be read regularly.

The Educational Review.

The Pedagogical Seminary.

Education.

The Manual Training Magazine, Peoria, Ill.

PAPERS ON THE PROFESSIONAL PREPARATION OF HIGH-SCHOOL TEACHERS

I

H. M. BARRETT, PRINCIPAL OF HIGH SCHOOL, PUEBLO, COLO.

1. It might be inferred from the subject of this paper that the professional preparation of the high-school teacher is not always satisfactory. I shall not object to the inference. Rather, I shall try, first, to furnish a bill of particulars in the complaint against the high-school teacher's professional training; second, I shall mention some of the reasons why this training is not all that it should be; and finally, if I can, I shall point out how the high-school teacher may secure the proper professional preparation.

The faults in the professional preparation of the high-school teacher may be grouped under three heads: First, although the high-school teacher has sufficient education, broadly speaking, he does not know how to teach. It is not long since it was assumed that anybody with a college diploma was fit to teach in a high school; and if he had taken high rank in his college classes then any high school was lucky to get him. The superintendent and principal,

at least, have long since been made to realize by abundant experience that a good student is not always a good teacher. In the light of this experience they have been chary about giving a try-out to the unseasoned graduate, if one may borrow a football phrase, and they have tried to insist when they could on successful experience in other high schools as evidence of ability to teach.

2. The second item in the bill is that the teacher who has anticipated his work and has undertaken to prepare for it has frequently devoted himself almost exclusively to the study of a single branch. He has gone in for science, or has taken everything in advanced mathematics that his college offered, or has spent considerable time in the study of Anglo-Saxon, has attended with enthusiasm all the classes in literature, and has devoted himself assiduously to the work in theme-writing and in the composition of sonnets. Thus prepared for his special work in high school, he comes to teach boys and girls to do the same thing that he has done. The specialist has studied not wisely but too well. If he be a science man he feels that he ought not to have to correct English in the notebooks of his pupils—and indeed he ought not; but when the need exists, as it does now and then, he cannot agree that every teacher should be an English teacher before he is anything else.

3. Finally, the complaint against the high-school teacher is that, even tho he could teach mathematics, science, English or what not, he cannot teach boys and girls. One principal puts it brutally that the high-school teacher has no sense. This is a hard saying, but there is directness and finality in the sound of it that carry weight. Ordinarily, the statement that a man has no sense is a tolerably sweeping condemnation; but when we examine the meaning of the word "sense" in this connection we find that it signifies about all that makes a man a master in any profession. A man may have the finest university training in medicine, but if he lacks sense he will not succeed as a physician; lack of sense in a lawyer will make a superior knowledge of the law of little value. The fact is that sense, fundamental as the quality appears, and fundamental as it really is, actually implies all that makes one a strong teacher, a great teacher. It may seriously be doubted, whether, after all, sense is not a gift with which one is born, rather than an accomplishment which can be acquired by training. An old professor of mine used to say: "There are some things which, if a man doesn't get before he is four years old, he never gets." I fancy that sense is one of these things. The French, who are polite, call it *savoir faire*, and so called, it sounds more like something which may be acquired by study and growth.

Most principals are apt to feel that the reason why the student fresh from college fails as a teacher lies in the fact that he unconsciously assumes that high-school boys and girls are young ladies and gentlemen. Technically, so far as age goes, and so far as the name implies nice young people, decently brought up by particular parents, they are young ladies and gentlemen; but mentally, for all the practical purposes of the teacher, they are still boys and girls. They are not at all ready for college methods of instruction. It will

not do for the high-school teacher to give a course of lectures and permit the pupils to take the instruction or leave it as they choose. If they choose to leave it the loss is theirs, true enough; but they must not be allowed to leave it.

The old masters knew their duty in this regard, and they did it—often with groanings on the part of the pupils that could not be uttered. There was a certain crudeness about their methods which would not be tolerated today; caning and flogging were long the effective means of inducing interest in study which the Herbartian doctrine does not approve. Yet the old masters understood their problem well enough, no matter what we may think of their method of solving it. They knew that boys and girls cannot be left to themselves to study or to take the consequences in a life of inefficiency in the vague future. They knew human nature well enough to understand that the doctrine of future punishment, however well founded, is not an efficient cause of present effort with men and women, much less with boys and girls. And in their own primitive way the old masters undertook to supply an immediate substitute for future punishment, unpedagogical, no doubt, but often effective in accomplishing results.

The specialist, too, because he is a specialist, has lost some of the advantages possessed by the old master. If the boy does not do well in his particular subject, the boy to him is a ne'er-do-well. The specialist knows nothing about the pupil except what he sees of him in his own class; and if the pupil fails there he is condemned utterly. The principal who sees this situation often feels that it would be well if the specialist were required to teach more than one subject—well for the pupil and well for the specialist.

4. The limitations of the college graduate and also the limitations of the university-trained specialist are summed up in the indictment that they do not know boys and girls and therefore they do not know how to deal with them. These teachers are too apt to shift upon others the responsibility for a pupil's shortcomings, to throw it back upon the grade teachers, or to attribute it to some lack of rigid discipline in the high school as a whole. Often one hears such teachers lamenting the fate which condemns them to the annoyance of petty discipline, and weakly wishing for a college position. Not till they learn the joy of being alive among boys and girls and of watching them grow under their hands into men and women, can these hope to be high-school teachers in the real sense. Now, they do not realize that it is folly to place responsibility for poor work on other teachers, or, indeed, upon the pupil himself. Here is the pupil with all his imperfections on his head. It is up to the individual teacher to train that pupil to do the work in his class and make a man of him in that work. The grade teacher knows that if any one of her pupils fails in the next higher grade it is a reflection upon her. Much more, however, does she appreciate that if he does not do good work in her grade nobody can be blamed but her. The unsatisfactory pupil is a perpetual problem to her, and there is more joy in her heart over the successful solution of one such problem than over ninety and nine that need no solution. Every time she

solves such a problem she knows that she has proved herself a real teacher; every time she fails to solve such a problem she must feel that she has measurably failed as a teacher. How, then, thro professional preparation, can the high-school teacher fit himself to do the work before him, to assume the responsibility of teaching, not physics, or English, or mathematics, but boys and girls?

5. The high-school teacher ought of course to know the history of education and the history of the development of the secondary schools. It is not quite clear precisely how this is to help him solve particular problems in training boys and girls; but, intelligently used, the knowledge and appreciation of the present in the light of the past should be of real value in giving the teacher breadth of view and grasp of the work as a whole.

6. Educational psychology ought to have its place in such a course of training. Yet here, too, the value of the study will be general rather than particular; it will be more valuable for the man himself than can be pointed out for specific use in his daily task. An attempt to apply such knowledge narrowly and rigidly will almost certainly make the teacher unpractical and pedantic, and will be attended with ridiculous and even with disastrous results. This suggests the need that the high-school teacher have, as a prerequisite to his special training, the broad and liberal education represented by a four years' college course. Such an education ought to give him the habit of seeing "great things large and little things small," of "seeing life steadily and seeing it whole." If one might particularize in this digression it would be to say that in his college course the teacher ought to get a great deal of practical value out of the pursuit of a thoro-going course in sociology.

7. With this general education to fortify him, it ought to be safe for the future high-school teacher to give some time to the study of pedagogy. Without the general education, there is great danger that the teacher may fall into the error of thinking that pedagogy is the whole thing in education. To the practical teacher, it seems just to exclaim, modifying slightly the familiar phrase of Madame Roland, "Ah pedagogy, how many crimes are committed in thy name!" Pedagogy isn't much of a science as yet. It has in it commonly too many glittering generalities, too many half-truths that the narrowly educated teacher accepts as absolute and comprehensive.

8. It is scarcely necessary to mention as a book which the high-school teacher should include in his course of professional training, Dr. Stanley Hall's great work on *Adolescence*. No book exists which deals so minutely and so comprehensively with the life in which the high-school teacher works.

9. It is not likely that any educational expert will object to the course of study thus outlined as too extended; if anyone cares to elaborate it the writer of this paper will not seriously object. Yet the element which the writer regards as most important in the proper professional preparation of the high-school teacher has not been mentioned. It is the element of experience. In teaching, quite as much as in any profession, trade, or business, we learn

to do by doing. Nothing can take the place of actual work in the schoolroom. The practice school under supervision will not answer. It is good so far as it goes, but its conditions at best are more or less artificial.

10. Here perhaps might be mentioned the normal school as a training-place for high-school teachers. The normal school would undoubtedly serve to supply some of the common deficiencies in the high-school teacher's training. It should never be accepted as a substitute for the college, for with most high-school pupils who are to continue study after graduating from high school the college is the next step, and the high-school teacher will not do the best for these boys and girls unless he knows intimately what college is. The training furnished by a good normal school as supplementary to the teacher's college course would be quite worth while, for it would bring the teacher closer to the work before him. It is a mistake to suppose, however, that normal-school training can take the place of actual experience. Here, as in the university, conditions are inevitably artificial, though the study of methods as taught in the normal school will be most helpful to the college graduate who intends to teach. But the teacher cannot do his best or develop those qualities and that skill most needed in a teacher while a critic is looking on and taking notes of his faults in manner and method. A brief experience of a few weeks or months in a room of boys and girls somewhat trained to habits of work by others furnishes small opportunity for the use of initiative on the teacher's part. The teacher in the making needs to be confronted by conditions, not theories. Such conditions only will force him to summon to his command those methods and expedients which, so far as they are of real value, are in every teacher matters of personality. Something, though generally very little, the teacher may gain by watching the work of good teachers; very little indeed, unless it be appropriated in a condition of mental and spiritual hunger on the teacher's part, and assimilated and made a part of himself under the healthy normal conditions of real work for which he is actually responsible and which is genuinely his own.

11. In view of these considerations, then, the high-school teacher should have a year or two year's experience in grade schools, where as an actual and responsible teacher he should see growing under his own hand the mental and moral character of a school of boys and girls. In the grades the high-school teacher will have learned intimately and accurately a great deal of the method of thought and of the feelings and motives of the boys and girls which he is to teach in high school. He will have some practical notion of the proper and legitimate use of the word apperception, which without this experience, he might be prone to regard as one of the charm words with which the child-study priests are wont to cast a spell upon their converts. In the grades, if the teacher is to do anything at all, he must first divest himself of college methods of instruction and meet the boys and girls on their own ground. He must recognize also, because he directs all matters of discipline and study, that he, and he alone, is responsible for all the conditions in his school-

room, for the pupils' attitude toward work, and for the growth and development of all the pupils under his charge. He may not steel himself to endure an ill-trained, disorderly class for one recitation period, while he looks forward to the hour when he shall have a class and has learned habits of good behavior and systematic work from some other teacher. This is where the teacher too often fails who serves his apprenticeship in the high school, for here the road to success is long and hard, unless unusual natural ability combined with a large measure of good luck forces the truth home to him. In the grades the conditions will compel him, in the phrase of Carlyle, to make truce with necessity, which the sage of Chelsea points out to be the foundation of all success.

The poor high-school teacher as a rule lacks that professional training which puts him at home with his pupils. Nor can he easily gain this part of his training in the high school, where the pupils are at the adolescent stage. They are awkward and diffident, mentally as well as physically. A few years earlier, in the grades, these pupils would have made themselves at home with the teacher; now it is the teacher who must take the initiative and take it easily and naturally. Nowhere in the child's life is the need so great for the trained eye and the steady hand as at the high-school age. The teacher who tries to gain these in the high school is like the pilot who should take his first lessons at the wheel in steering a boat through the rapids. The high school is a poor place to gain the first experience in teaching. The conditions are too complex.

Objections may perhaps be made to this method of professional preparation on the ground that the teacher who is to do high-school work cannot afford, on account of the poor pay, after having invested in a college education, to accept a position in the grades. The answer is that this is the final step in the teacher's training. This work in the grades ought to be far more valuable to the teacher than to the school. If the superintendent is willing to give the man or woman fresh from college a chance to teach in the grades, the man or woman ought to be glad to get the place; and ought to strive conscientiously to do as much good and as little harm as possible to the pupils intrusted to him. The young doctor with four years of college and two or three years of medical school behind him is glad to get a place as interne in a hospital and work a year or two for his board in order to get the practical side of his profession. The young lawyer, having earned his B.A. and his LL.B., is glad to work at small pay for a successful law firm, and plead his first cases in a justice court, in order to learn the routine of office and court work. The clergyman just out of the seminary is fortunate if he can get an appointment as assistant in a good charge and learn here the rudiments of his profession. The most promising of the men who graduate from the technical schools are eager to begin at the bottom in the factory or in the railroad shops and learn the business from the beginning; they understand that it is a valuable and often a necessary step toward the manager's office or the private car to have worn overalls and carried a dinner bucket. So the schoolmaster with all his degrees and his special study may well serve his apprenticeship in the grade school-

room at a very small salary, realizing that for the first two years he is much more of a learner than a teacher. He needs to approach his work from a direction altogether different to that from which he has approached it before. He has studied historical facts and scientific theories; now he must get down beside the boys and girls and look at things with their eyes, see the world as they see it. Only so can he use his facts and theories to good purpose as a teacher. The course in education at the university is of great value to the experienced teacher; it is commonly worth little to the college graduate without experience in the schoolroom.

12. To put it briefly: Let the college student who is to teach in high school specialize somewhat in the lines of his chosen calling during his last two years in college. Let him study the history of education, particularly of secondary education, educational psychology, pedagogy, methods of teaching his special subject, and the relation of his subject to the whole work of the high school; let him learn what Stanley Hall can tell him of the adolescent period. Then let him get a place in the grades and learn how to teach boys and girls, how to understand them, and how to work with them. After two years of this work the teacher ought to be ready for work in the high school. He will then bring to his task a fund of school lore not to be found in books or in courses of education; he will even have accumulated a store of sense. This, from the standpoint of a high-school principal, is the proper professional preparation for the high-school teacher.

II

STRATTON D. BROOKS, SUPERINTENDENT OF SCHOOLS, BOSTON,
MASSACHUSETTS

1. A somewhat extended observation of teachers causes me to believe that one of the important elements leading to ineffective teaching in the secondary schools of the country is that the teachers fail to get the pupil's point of view. They do not see the subject taught as the pupil sees it. A large majority of them give greater attention to the logical development of the subject than to the development of the logical powers of the pupil. This is due to the fact that the training of these teachers has been largely, if not wholly, academic, and that their professional training, if any, has been incidental and superficial. Academic training, as here used, means the study of the subject for the sake of mastering it as a subject in its logical and epistemological relations, while professional training, as here used, means the study of the subject with reference to its adaptability to use as an instrument for developing and training the mind of the pupil. Such professional training will include the supplementary study of all allied or additional subjects that will aid in this purpose. To the extent that academic study of any subject prepares a teacher to use that subject as an instrument of child development it is professional in its result.

2. Since without an academic knowledge of his subject the teacher cannot teach that subject, it follows that the academic pursuit of knowledge must be a fundamental part and parcel of professional training. The amount of special study in any single line will vary with the nature of the subject. Four years of work in Latin beyond that of high-school grade is not too much to require for a teacher of Latin, nor would four years of work in sciences as a whole be considered too great a requirement for a teacher of science. For a teacher of chemistry, however, suitable preparation on the academic side may require less than four years of work in chemistry alone, though the total time given to scientific study by such a teacher should not fall below four years of college work. In general, the greater the academic accomplishment of the secondary-school teacher, the better his teaching will be; provided this academic study is so tempered and modified by professional study as to enable him to select from his greater store of knowledge those items of most use in the development of his pupils. The evils of over-specialization are not those of excessive academic preparation but those of insufficient professional preparation. The minimum requirement for a high-school teacher should be graduation from a college course in which special study has been given to the subjects that the candidate expects to teach.

3. In addition to as complete and accurate scholarship as can possibly be obtained, the training of the secondary-school teacher should include many items that will give to this academic knowledge its greatest efficiency as an educational instrument. These elements may be properly termed professional. Some of the more important ones are as follows:

4. A teacher should have a knowledge of the fundamental aim and purpose of education. This involves a knowledge of our present civilization and the obligations of the citizens of it. Even a partial understanding of the present ideals of education can be arrived at only by considering the process by which they have come into existence. It is necessary that the teacher understand the more important epochs in the development of civilization and the means adopted in each to educate the citizens therefor. Without this knowledge the teacher must accept the statements of others as to what constitutes the aim of education, and will be unable to select from the different claimants those having the largest basis in human experience. The teacher's professional course must therefore include a study of a large portion of the *history of the world* with special emphasis upon the part of education therein and with some consideration to the *history of secondary schools*.

5. The teacher must be thoroly familiar with the child, not only to the extent of understanding the laws of his development, but what is more important to the extent of appreciating the child's point of view, and being able to look upon the world as the child looks upon it. Study alone cannot give this last. The sympathetic attitude is not based solely upon knowledge, but is rather ingrained in the character. The teacher who is most analytical, who most clearly separates and picks apart the mental machinery of childhood, is

likely to be the least sympathetic and so most often fails in the schoolroom. It is true; however, that given the sympathetic attitude, this sympathy gains in point and purpose from a complete understanding of the needs of the child. The increase in teaching power that the study of psychology and the consideration of the facts of adolescence will give to the teacher attuned to the appreciative attitude is immeasurable. *Psychology, with emphasis on adolescence*, must therefore be included in the teacher's professional course.

6. The final goal and the point of departure being known, the major lines of educational procedure are thereby determined. The teacher who has decided what he will consider the fundamental aim of education, and who appreciates the condition and methods of development of the child, has a standard for judging the truth or falsity of educational principles that is not possessed by one whose ideas of either of these subjects are hazy and indefinite. The professional study of a teacher should therefore include the full consideration of *the principles of education* as determined by the nature of the child and the purpose of education.

7. After such a study, intelligent consideration may be given to the adaptation of the subject-matter of instruction to the needs of the pupil so that by selection and modification this subject-matter may be presented in the way that will most rapidly advance the child toward the desired end. *The general principles of method* will therefore find a place in the teacher's professional course of study.

8. The academic study of the teacher will give him a knowledge of the subject-matter of instruction, but his attitude toward it will be that of the adult mind, and his conception of it that which will make it useful for other purposes than educational ones. To this academic knowledge of the subject the teacher should add a professional study of it by means of which he will determine what aid it will give to the general purposes of education; what portions of it are possible of acquisition by the child; in what order these should be presented so that the child's development will be most helped; by what methods it may be made to conform to the child's point of view; to what extent it must be accommodated to the general principles of methods; and what special devices and applications the experience of years has shown desirable and effective. Of quite as much value as all this, his professional study should show him what not to do and enable him to avoid the repetition of experiments long since shown to be detrimental. The professional course should include, therefore, a study of the *special methods* of instruction in the subjects to which the teacher expects to give the major portion of his attention, together with the *history of the teaching of that subject*.

9. If all the preceding could be accurately determined and carried into effect we would have the ideal. Unfortunately the ideal is unattainable, and the teacher who fails to accommodate his ideals to the necessities of his work will have his failure charged up to his being a mere theorist. We are not alone in this world and not only must all the preceding be determined in its applica-

tion to many pupils rather than to one, but it must be applied by a teacher working with other teachers and instructing many children at the same time. All that he does is but one additional element in the large number of influences at work upon the children, and any theoretical determination of what ought to be produced must give way to the clear conception of what is really produced. The modifications and adaptations that numbers render necessary must have consideration, and no teacher is educationally equipped who has not given careful thought to the necessities of system and organization, so that in so far as possible their advantages may be preserved and their disadvantages avoided. Quite as much for teachers as for supervising officials a study of *school organization and management* is a necessary part of the professional course.

10. To give attention to the moral, mental, and social progress of the child will be of small value if we do not at the same time make sure that he is surrounded by conditions that render possible a healthy and vigorous physical development. The enforcement of compulsory education carries with it the maintaining of proper hygienic conditions. The daily routine of schoolwork will include careful attention to *school hygiene* and instruction in this subject should be included in the professional course.

11. With such professional equipment the teacher is prepared to start his work with a clear understanding of his problem and can derive the highest benefit from his experience. But to start with such an equipment is not enough—it must be kept. The teacher who falls behind the times is a clog upon civilization at the point of greatest hindrance. Education is a live, vigorous, growing subject, and the teacher must know the lines of that growth. For this he must depend largely upon his reading, but it must be reading with discrimination. Every age has brought forward some theory of education that has been followed by large numbers for a considerable time before its fallaciousness became apparent. Every month the educational journals of the present time set forth some man's idea, promulgate some new theory, propose some new device. Some of these are good and will in time become the commonplaces of education; some have elements of good, some are wholly and completely bad, and tho attractively presented, are based upon a false philosophy and must be ultimately discarded. To read educational literature understandingly, so that the true may be sorted from the false, demands a logical and philosophical training. The teacher not trained in this becomes a mere follower, quite unable to tell whether his leader is an educator or an impostor. The course in professional training must, therefore, include sound training in *logic*, *philosophy*, and *ethics*.

12. The order in which the elements of professional training have been named is not intended as indicating the order of acquisition. The training in logic and philosophy that will be a protection against false theories of education after graduation will also be of great service to the pupil as an undergraduate, and its elements at least should come early in the course. It is

likewise undesirable that the theoretical study of the principles and methods of education be separated entirely from their practical application. Especially for those who have no experience as teachers it is highly desirable that during the period of training they have access to a school for observation and practice. Even those with experience find great profit in teaching under skilful criticism. The professional course should include, therefore, some experience in *practice teaching*.

13. Such a course of professional training as here outlined cannot be conducted with any high degree of success under the direct domination and control of the regular college or university faculty. The attitude of the college professor is properly and necessarily academic. His attention both as a student and teacher has been so long turned exclusively to the academic side that the case is rare indeed that he is competent to offer professional instruction of even medium quality, yet he is seldom conscious of this and looks with contempt and suspicion upon the efforts of the department of education to discuss how to teach a subject about which it knows academically so much less than he does; nor does he look with favor upon allowing another department to teach in any way a subject that belongs to his department. Education is, however, an all-inclusive subject, and the material of the department of education embraces everything in all the other departments, tho from an entirely different point of view and for a different purpose. It must have free range thru all the field of knowledge unhampered by any personal or departmental prejudices. There are great advantages derived from close correlation with a college or university, but professional training in its best form is possible only when the department of education is large enough to attain to the dignity and organization of a separate college, to have its own professors, and to dictate its own policy.

III

J. STANLEY BROWN, SUPERINTENDENT OF JOLIET, ILL., TOWNSHIP HIGH SCHOOL

According to my scheme this subject is fairly treated under the following heads:

(1) Physical. (2) Mental. (3) Psychic. We have for a long time rejected the notion that the valedictorian of his class is the man from whom we may expect the greatest returns, since it must be conceded too often that his superiority rests in a trained mind only. Symmetry, balance, poise, or what may be put into phrase all-round development, is the acme of desire in the preparation of teachers for secondary schools.

1. The physical man demands the best and most careful training the college and universities afford, because it must be the setting for all that is ever accomplished by the individual. A carefully developed physique will often meet the deficiency existing in other directions. Many of the struggles which

teachers seem called upon to endure are physical. Headaches, deafness, impaired vision, abnormal digestion, irregular appetite or entire loss of appetite are a few of the physical defects which result from our failure either to use the knowledge we have or to secure the knowledge we ought to have. Most disagreements between teachers and students in schools and colleges of all grades may be traced, by proper analysis, to physical causes.

It ought to be a part of every teacher's daily gospel to be able to say that every organ of his body is performing its normal function. If our daily attention to the physical were heeded half so well as that to the mental, we would certainly have fewer teachers with the *rhéumatic* type of mind.

That the physical is the most fundamental and ought to act as a setting for the other two ought not to be questioned. The foundation must always precede the superstructure in the course of construction. The furniture, the adornments follow after the foundation, walls, etc., have been completed, and must ever be the sequence in human, magisterial development if we would accomplish the most with the material at hand. When we have learned to give the proper attention to the physical, sarcasm, bitterness, scowls, impatience, extreme nervousness, irritability, etc., will very largely disappear and in their places we shall find encouragement, sweetness, pleasant smiles, patience, well-balanced nerves, etc.

If we had to choose between a well-developed physique and a modicum of mental training, or the reverse of these two things, we would, without hesitation, choose the former for our boys and girls. Many of us who have positions of responsibility have been preaching with others, "send the whole boy to school; educate the whole boy." But when the boy came to school we gave him books, or, perhaps, we excused ourselves by saying, "this is the kind of training I had and this is good enough for these boys."

If we wish teachers to teach the whole boy we must demand that the teacher himself shall be educated in the threefold sense I have mentioned.

We as teachers are much inclined to teach as we were taught. The water does not rise above its level. We must teach by example as well as by precept. It is not enough for the faculty to put off the preparation of physique by saying this belongs to the football coach, because it is most likely needed by all other members of the faculty more than by the athletic coach.

Let boards of education demand good physiques as well as university-trained minds and responsive souls and all will bestir themselves to meet the conditions. If we accept Emerson's statement that "the test of civilization is not in the census, nor the size of cities, nor the crops, but the kind of men the country turns out," teachers ought to have good bodies as well as good minds and souls.

In addition to the more general development of the body, teachers ought to be participants in some outdoor exercises, such as walking, running, jumping, horseback riding, bicycle riding, tennis, basket-ball, base ball, rowing, hunting and other kinds of physical exercise. I am quite persuaded that no one

except a cripple should be graduated from college until he has learned to swim. This would mean that a very large per cent. of teachers in the secondary schools would at least know how to swim. If we teachers paid more attention to the development of the physique we would have better teachers, better schools, and much less friction in the management of the schools.

2. What shall be the scholastic training of the mind of this teacher for secondary schools is, in the minds of some, considered to be the most important, in the minds of others the all-important, but, in our judgment, on a parity with the other two.

Other observations show us that more teachers are failures because of insufficient training than from extra sufficient, and yet we maintain that overspecialization by secondary-school teachers tending to make the subject taught the center of greatest importance and *not* the boy taught is distinctly detrimental. The day has gone when an indulgent public applied the name "teacher" to one who performed the function of a condenser and distributor of knowledge. We are not content with a wooden, mechanical, commercial type of teacher. The teacher today must be a live wire with an ever-increasing current, and that in order to meet the present demands with a fair degree of satisfaction. The secondary teacher ought to complete the four-years' course in a secondary school, four years in a good college, and then take a year of professional training either in a normal school or school of education. The preparation cannot continue to satisfy, however, unless all the best in pedagogical literature is constantly sought and appropriated. It is often posited that a teacher in high school cannot have too much preparation for his work, but I am convinced that the completion of work for the doctor's degree is not desirable for one who expects to teach secondary-school students, because to do well in such work the field must be very narrow and the effort intense. There can be little or no thought given to boy pedagogics if one's whole thought is given to the subject, and hence, we incline to give to the Ph.D. earned *in cursu*, a place in college or university, but not in secondary schools as most are conducted at present.

Foreign travel is very desirable for secondary teachers because it renders real so much that has hitherto been admired in our college or university training, but has to be limited to our narrow experience. Seeing a great mountain or a magnificent cataract forever fixes the concept as no amount of reading or oral description can do. I would not make this mandatory but it ought to be held out as an inducement to become worth more in public service.

We have spoken in the main concerning the scholastic preparation before regular service, as an instructor begins, but no one who has had any experience in teaching or who has even observed the work of the teacher would think that this is anything but the beginning of preparation, and is simply intended to meet the first general requirement. The man or woman in the teaching profession who does not see to it that his or her preparation to do effective work increases year by year is scarcely worthy to belong to the profession, and so

the leaders in educational advancement must read the best journals, study educational movements at home and abroad, visit the best schools of any and all grades, attend teachers' conventions, pedagogic clubs, do correspondence work along lines not touched by the universities ten years ago, and withal keep abreast of the times.

The teacher's preparation must keep pace with the preparation of the men and women of other professions. The best schools of law and medicine require six, seven, or eight years of college and university above the high-school course, and the tendency at present is toward an increase rather than a diminution in the work. The teacher must either keep up with the highest and best demands of the times, or be relegated to a position of constantly diminishing worth.

3. Let us turn now to the third phase of this subject. The moral force of any teacher among students is manifested much more in what he really *is* than in what he really does. Teachers are too often looked upon as negative forces simply because they refrain from doing something whose moral quality is mentioned and yet do nothing positive and aggressive to take the place of the injurious act.

Moral character, psychic force, does not need expression in word, and such expression would often be ineffective because these things do not easily lend themselves to description.

Honesty, justice, love for a square deal, must find a place in the character of the teacher if he is to create and maintain among his students an atmosphere above reproach in his dealings with all the vexed and perplexing questions that may come up. Since we are a Christian nation, and since religion is the recognized basis of soul culture, religious training should be as carefully secured by the secondary teacher as training of mind or body. We are sometimes prone to forget that great paragraph in the famous ordinance of 1787. "Religion, morality, and knowledge being necessary to the perpetuity of a free government, schools and the means of education shall forever be encouraged." Our fathers placed religion *first*, morality second, and knowledge third. We need to return to the doctrines of our fathers. In our scheme of preparation for teaching we are inclined to give place to ethics, or temperance, or to a few lectures on purity, when we ought to stand for the weightier matters of the law. Setting aside the question of where this preparation in morals, soul culture, and religion may be secured, whether at home, in church, in school, or in all, we must admit that these qualities are very vital and must be emphasized in the preparation of the teacher. The kind of man we turn out will be woefully deficient if he lacks moral character and real religious attitude of mind.

Jesus, whose teaching we look upon as the best known in the Christian world, was the greatest teacher the world has ever seen or known. There is no great pedagogical scheme that cannot be traced directly to the methods and teachings of Jesus. If we teachers could teach as he taught, we, too, could revolutionize the world in three years or less. Let us then incul-

cate this teaching as representing the best in character building, psychic culture, and ethical dogma.

We have tried to show that the preparation for teaching in secondary schools ought to show a symmetrical development, that this development should include body, mind, and soul; that proper physical development should mean good digestion, good nerve power, good endurance, good disposition, good organic functioning, and a cheery, responsive individual; that the proper development of the mind may be met by graduation from secondary schools and association with secondary-school people; by graduation from college, together with the association of the college; by completing either at a school of education or a good normal school one year's work in professional courses. Added to this scholastic preparation may come foreign travel, pedagogic study in paper and magazine, attendance on school conventions, clubs, etc., and these with a view to keeping abreast of the times.

Finally, and in many respects most important, is the psychic preparation which has fundamentally to do with the religion of Jesus. Whether obtained in the school, the home, or the church, it is vital in the development of the highest type of teacher in the Christian man or the Christian woman. When we have carefully directed the training along these three lines which must run parallel with one another, we have done what seems best in the production of a symmetrically developed teacher.

IV

ELLWOOD P. CUBBERLEY, PROFESSOR OF EDUCATION, LELAND STANFORD JR. UNIVERSITY

The secondary school is pre-eminently the place where the boy or girl is brought into contact, not only with new forms of knowledge, but with new ideas, new ideals, and new methods of work and of investigation. It is the place for the broadening of the boy or girl in culture, appreciation, and insight, no less than in knowledge. It is these new ideals, new methods of work, and increased culture and appreciation which give point and effectiveness to the whole secondary-school training. While they are inseparable from knowledge, they are worth even more than the knowledge which the school imparts.

When one thus considers the secondary schools, either from the point of view of the needs of the adolescent or from the point of view of the subject-matter to be taught, one can scarcely overemphasize the importance of the proper preparation of the high-school teacher. Just as we emphasize the need of broader knowledge and culture for the teacher in the elementary school, in order that she may know more than she is expected to teach and be able to make her teaching broader than the mere course of study or the textbook she uses, so must we insist that the teacher for the secondary school shall know more and shall have had a broader and more extensive training than that offered by the secondary schools themselves or by the normal schools of the state.

1. Much of the work of the high school of today, with its elective courses, many subjects of instruction, and advanced instruction along certain lines, is fully as advanced as that done in the first year of the college course. Unless the teacher in the high school has come in contact with men who are masters of their subjects, has caught something of the masters' spirit of dealing with the great truths that lie in this field, and has learned something of that method which, after all, is only organized common sense, which men of larger scholarship apply to the solution of difficult problems, he is not likely to carry much of a message to the young people who come under his direction in the secondary school. This practically demands that the teachers in our secondary schools shall be college graduates, and shall have prepared themselves specially for the work which they propose to do. The secondary school itself does not offer such opportunities, and our normal schools, devoted as they are and ought to be to the preparation of teachers for the elementary schools, cannot adequately give such training.

The secondary-school teacher is distinctively in need of three things, viz.: (1) broad general knowledge; (2) special knowledge, and (3) professional knowledge. Other things being equal, the broader the teacher's general knowledge the more useful he will be. This general knowledge, or broad liberal culture, is largely a product of opportunities and experiences. Larger educational opportunities in an atmosphere of scholarship and culture, with travel, are the best means of securing it.

2. Special knowledge of an advanced nature in the fields in which the candidate proposes to teach is an absolute necessity. It cannot be emphasized too much that the person who desires to teach in our high schools must know that which he is to teach. That fair or indifferent successes are made today in many of our high schools by teachers who are teaching subjects which they have made little or no preparation to teach is no argument against the principle. Where such teachers are employed one generally finds that the community lacks proper standards as to what high-school education should be, or sufficient funds to properly maintain a high school, or both. One of the best guarantees for successful teaching, tho by no means an absolute or a sufficient one, is that the candidate shall have made careful preparation for the work of instruction in a given subject. One of the greatest weaknesses and reproaches of the American secondary schools today is the altogether too common lack of any adequate preparation on the part of the teachers, and the general indifference of the state in the matter.

3. In addition to general and special knowledge, the prospective teacher needs professional knowledge. By professional knowledge is meant professional preparation for the actual work of instruction and a professional attitude toward the work of the public secondary school. To this end the prospective high-school teacher should be required, during the last two years of his college course, to make a somewhat general study of the work and problems of public education in a democratic society such as our own; the work, purpose, and

special problems of secondary education, with some comparison with conditions in a few European states; the psychology of instruction and of the adolescent period; special teachers' courses in the subjects in which recommendation is sought; and some practical experience (how much is needed will vary greatly with different individuals) in instruction and class management. It would be well if the candidate, in addition, should know something of the history of education, and especially the history of education in our own country. I place the history of education after the others because it is largely cultural and inspirational instead of technical.

One of the most important legislative steps to be taken by most of our states in the matter of certificating teachers is the complete separation of the credentials necessary to teach in a high school from those necessary to teach in an elementary school, and the erection of distinctly higher standards for the high-school certificate. In view of the possibility of a six-year high school becoming somewhat general the high-school certificate should not be limited too closely as to its validity, but the elementary-school certificate, of any grade, should never be valid for instruction in a high school.

In the erection of such a special certificate for high-school teaching we obviously cannot depend upon the written examination. The standard of competency in general, special, and professional knowledge set above practically demands that the secondary-school teacher shall have had a college education, or its substantial equivalent. To examine the candidate on the subjects studied in college would be not only almost impossible, but ridiculous as well. To attempt to enforce the higher standard by an examination given on the subjects to be taught in the high school will also fail, for the reason that the high-school graduate, fresh from his studies, can almost always pass the examinations more easily and with better grades than the college graduate. The result will almost always inevitably be that in certain localities there will not be a college graduate in the high schools. This was clearly the experience of California under the old optional examination plan, and was one of the strongest arguments which led to the abolition of the examination for the high-school certificate. The only safe way to do is to make the possession of a degree from some reputable college an absolute prerequisite for high-school teaching, and to grant high-school certificates only to those who, in addition to the degree, present evidence of special and professional preparation for the work of teaching in secondary schools.

In many of our states the absolute enforcement of such a requirement would not be possible at present, but in almost every northern and western state a movement looking in that direction is possible now. The first step in the process is the definite recognition of secondary-school work as a field which demands special and additional preparation, and the separation of high-school certificates from elementary certificates. The former should then be based on higher educational standards, and college diplomas and other evidences of preparation should be recognized as the full equivalent of the subject-

matter examination. The second step in the process, to be taken as soon as the supply of properly educated and trained teachers equals the demand, is to diminish in frequency and importance and finally to entirely abolish the subject-matter examination and thus make the possession of evidence of proper education and training a prerequisite for the granting of the high-school certificate. When such conditions come to prevail somewhat generally, and not until then, can we be said to have an educated and a professionally trained teaching force in our secondary schools.

V

CHARLES DE GARMO, PROFESSOR OF THE SCIENCE AND ART OF EDUCATION,
CORNELL UNIVERSITY

1. Practically all institutions for the training of teachers, to be found in the United States, are adjusted to elementary standards. Even in college and university professional courses the ideals of the earlier stages of education have heretofore predominated. We are just beginning to realize that the professional training of secondary teachers differs from that of primary teachers, not only in degree but often also in kind.

In the first place, so far as subject-matter is concerned, training for elementary teaching circles about the common branches, which everybody is supposed to know, which all teachers must teach, and all learners learn. But the case is different with preparation for secondary teaching. Here the subject-matter is so extensive that no teacher can teach and no learner learn it all. It follows therefore that the student must choose (or have prescribed) what he shall study, and the teacher must select a department of knowledge in which he may become a special, or departmental teacher.

Out of these relations there arises the need for a kind of professional study that is but slightly felt in elementary circles—that namely, of relative practical and educational values. For, how, except by pure tradition or by mere personal preference, can a course of study be wisely advised for any given student unless the adviser is fairly clear as to the educational and practical significance, both immediate and remote, of each distinctive department of knowledge? And how, moreover, can one be expected to make his students realize these benefits if he himself knows not what they are?

It is perhaps natural that those who believe in the sacredness of a certain course of study as universally valid condemn the study of educational values, because they condemn the introduction of branches that would in some degree displace those they have. Thus I read in report of a recent Berlin speech in favor of classical training that “the brazen lords of nature are not the elected teachers of the immature.” Some there may be who prefer the “brazenness” of nature to that of such advisers. At any rate, I submit that it is a proper thing for the secondary teacher to be properly instructed as to what significance for life and for individual development the study of the various natural sciences

has; in what these sciences differ in their effects upon the mind, both as contrasted with one another, and with literary or historical studies? Where there are world-wide differences in the content of the studies, there must be significant differences in the educational results which the various studies should bring about in mental training. To make the old assumption that training is training, that only difference in degree exists, that each subject is an equivalent for every other in the degree of its effect, is to adhere to a superstition as incredible as that which ascribes green cheese to lunar composition. It is to shut one's eyes to the teachings both of psychologic and common sense alike. There are sciences whose basis is mathematical law; there are others whose basis is the unfolding of life—one group is demonstrative, dealing with the exact and law-accordant, the other is inductive, dealing with uncertain, often bewildering data. Compare, for instance, the study of a bird with that of a pump. The latter is comprehended when its mechanical principle is once understood; but when is one done with the study of a bird? We may study its life history, or its anatomy. The latter is almost without limit in its possibilities. Again, the mathematical sciences require for their retention that form of memory which rests upon clear insight into fixed laws, whereas the biological sciences are retained in mind thru a mastery of classification and an understanding of function. Likewise, the form of imagination stimulated by the two groups differs as radically in kind. If the nature poets had only the mathematical quality of imagination, it were a sorry task to read them. On the other hand, had the engineer only the biological quality of imagination, we should hesitate to cross his bridges or trust ourselves on his ships.

If the sciences differ so radically among themselves in their effect upon the mind, what shall we say of the contrasts they afford when compared with linguistic, literary and artistic, and historical subjects? Literature and art deal with ethics and aesthetics; history deals with contingent causes—those that might have been otherwise, had the circumstances of race, situation, education, economic conditions, passion, ability, or what not, been different. What man, not mole blind, could confound with one another the distinct educational effects that these various groups may have upon mind, heart, and destiny of a student? And what secondary teacher is qualified for leadership in this field who has not turned his attention to the fundamental truths that must underlie every rational course of study, whether in a special or general high school?

2. Such a study of educational values must, moreover, precede and underlie all rational study of methodology. Having only vague ideas of the ends which a study should subserve, how can a teacher be adequately prepared in the best methods of teaching it? And here it must be clear that method means to the secondary teacher something different from what it means to the elementary teacher. It is perhaps more special than general; or, at any rate, it falls more naturally into groups in accordance with the characteristic quality of the departments of study. Thirty years ago, for example, scientific

method was quite undeveloped; now it has developed so far in the universities that it not only rivals but, in many respects, surpasses in completeness of instrumentalities that which obtains in the older subjects. It has, for instance its laboratories with a place and a distinct set of apparatus for every student and an elbow-to-elbow assistant for every ten students. It has its lecture system which is kept in touch with the laboratory work, and it has, finally, its group system of recitations upon the combined work of lectures and laboratory, and of textbook study. No such elaborate and far-reaching ways of imparting knowledge have ever been devised even in languages and mathematics, to say nothing of history, economics, and social sciences.

As in the university, so in the high school the question of method rests upon a more technical basis than in the case of the elementary school. The candidate for the high-school teachership should base his study of method upon the nature of the subject-matter, the effects it should have in mental training, and upon the methods that have been effective in its development. He should not, if he is to teach science, be unacquainted with such books as Bain's *Inductive Logic*, and Jevon's *Principles of Science*, for these give him an enduring insight into the nature of his subject and the best ways to make it effective in the school-room. After a general methodical study of this kind, the candidate should make a special study of the admirable books now issuing from the press, such as the series by Macmillan and that by Longmans which are devoted to particular study. What can not a teacher of English learn from such a compendium as that of Carpenter, Baker, and Scott, or the teacher of mathematics from that of David Eugene Smith, or of Professor Young?

3. For the secondary teacher the study of the history of education should be more thoroughgoing and more special than it is for elementary teachers. While he should, of course, follow the development of universal education as seen in the elementary schools, he should at the same time give much attention to Greek ideals of culture and instruction since these have been so important in determining the curriculum of modern high schools. Upon this study of the sources of educational ideas, the student is prepared to base his future study of the rise and development of language as an educational means. In a similar way he should follow the introduction and development of mathematics, natural science, and history in the curriculum. It is well within reasonable expectations that the university student should master the admirable text of Professor Monroe upon the *History of Education*, and do not a little collateral reading besides.

4. With respect to the psychological basis for the study of education, it must first of all be remarked that the secondary-departmental teacher will not be a psychologist, for it takes five years to make a psychologist. What we may fairly expect from him, as a minimum, is a half-year's study of general psychology, and an equal expenditure of time upon applied, or educational, psychology, the emphasis being laid upon the period of adolescence.

5. The most difficult and most debated part of professional training for

secondary teachers is that of practice. The persons now most active in this discussion are those engaged in elementary training, not the principals of high schools or university authorities. It seems natural to think that if the practice school is a good thing in preparing elementary teachers, it would be an equally good thing in fitting secondary teachers for their work. Yet the matter needs some consideration on its own merits, and may need much experimentation before it is satisfactorily settled.

So far we have had little successful demonstration that a secondary practice school in the university is either practicable or desirable. No one would assume for a moment that a subject of such importance can be disposed of by a mere appeal to experience, positive or negative. Because a thing has been so or so adjusted in experience, long or short, home or foreign, we have no warrant for closing the debate, for the essence of progress often consists in innovation. Yet an appeal to experience is the natural introduction to a discussion of principle. In Germany the most weight has been laid upon the development of productive departmental scholarship, as a preparation for teaching in secondary schools. Only the man who knows his subject well enough to continue its development is, in Germany, theoretically fit to teach it in a gymnasium. This condition being met, the German candidate may turn his mind to other things. In the first place, there are two state examinations to be taken subsequent to his university study in which the history and principles of education are included. The secondary schools, being state institutions, and their teachers being state officials, the next step is to assign the young candidate to some gymnasium or school of similar rank for a year of trial or cadet teaching without salary under the supervision of the director of the institution. When the authorities are satisfied that the candidate can teach well, and when there is a place to which he can be assigned, his permanent appointment as a teacher follows. There are but few practice schools connected with German universities, and what there are busy themselves entirely with practice in elementary grades. This practice is of use to the supervisor of elementary instruction, but the question is an open one as to how useful it is to the real secondary teacher.

In the United States the practice of Germany is followed to a limited extent, as at Harvard and Brown with graduate students, while some are cherishing the hope which, in some cases amounts to expectation, of establishing secondary practice schools modeled after those of the normal schools. It would be premature to declare that the inherent difficulties lying in the situation cannot be overcome in this manner. Of one thing, however, we may be assured, that the means provided for giving the candidate his first practice in teaching, will in the end be those that conform most closely to the public interests concerned. Preconceived ideas, analogy with other institutions, practices of other countries, will all have to be measured by this standard. While we await the solution of the problem, as it will ultimately be worked out, it is perhaps allowable to consider the subject as it presents itself from theoretical and practical standpoints.

What shall we say, first of all, to the assumption that one may learn to do one thing well by doing another? Or, perhaps, that teaching is teaching, the same thing in the high as in the primary school, and that if you get good practice in the grades it will serve you equally well in the high school? This assumption must be seen to have decided limitations, because of the great differences between the two stages of school life. Young children are most effectively managed by an affectionate exercise of authority; high-school students, on the other hand, are most tractable when managed in accordance with the usages of good society. Authority there may be, nay, must be in the high school, but it is veiled by the social covering of politeness. To treat students as children is to be weak where one should be strong, for however childish some of their actions may seem, we may be assured that the feelings of American youth are those natural to the adolescent. The younger and more numerous in the class the children are, the greater the need of pedagogical technique; the older they become, the less need there is for it. It easily happens that the teacher trained in the methods of the primary school, but transferred to a high school, fails to arouse the best efforts of the students because he fails to apprehend the maturity of their capacity and feelings. The contact of mind with subject-matter is much more intimate and immediate in the high school than it can be in the grades. The intermediation of elementary devices for stimulating and guiding thought are far less necessary and desirable. The method of thought inherent in the development of the subject-matter itself becomes increasingly important as the student grows older, until in the university we often find impatience in any mediation between a subject of study and the mind of the student. The school man is rather inclined to condemn all teaching as unpedagogical that does not use the means of mediation with which he is familiar and which may be highly successful where he is wont to try them. But such condemnation may be wholly unjustified, as in the case of many famous teachers of language, history, and science. He is the best teacher who best succeeds in arousing the minds and hearts of his students to genuine educative activity, and while there is a wholesome methodology for the high-school teacher, I seriously question whether it is closely related to the technique so commonly employed in training elementary teachers. For the foregoing reasons I do not think that in principle we should train secondary teachers in elementary practice schools.

By this I do not mean that an elementary experiment school may not be of great educational worth in a university; but the function of such a school is not the training of secondary teachers.

Are practice schools of true high-school rank desirable and obtainable in connection with colleges and universities? Their educational desirability is dependent upon their educational (and it may be financial) cost. Advantages there would doubtless be in such practice schools, but it may be easily conceived that we find the community would have to pay too high a price for them.

In all our older communities the high-school teacher is a specialist both

because he wants to be one and because the school authorities demand that he shall be. A successful practice school of secondary grade should therefore be a large one to afford the desirable practice in many branches of study and kinds of schools. A teacher of languages would not be greatly inspired or guided by the teaching of a science, nor would the future specialist in history be much helped by teaching a class in mathematics. When we remember that universities must graduate large numbers of prospective teachers each year, every one of whom has specialized in one or two departments, we can easily see that such a practice school as contemplated would cost a formidable sum of money. But in America we need not be deterred by cost, if what we want is what the people want, or the cause of education imperatively demands.

Under favorable circumstances the people will stand and even pay for a practice school of elementary grade, but experience makes it questionable whether the public is willing to furnish students and money for one of secondary grade. An indication of the public aversion to such an arrangement is the potent fact that a private high school, like the Horace Mann School of Teachers College, for instance, would soon lose a large share of its patronage were it to introduce practice teaching in any considerable quantity. What the private public will not listen to, the public as such will probably in the end reject as an unjustifiable burden upon a few. And what no public will submit to, university boards of education are not likely to be willing to pay for, since it must be evident that in public opinion the advantages of such training would be too dearly bought.

The outcome of the foregoing argument may be summed up in the following propositions:

1. It is not worth while to establish elementary practice schools for the training of secondary teachers.

2. Practice schools of secondary grade, tho having some advantages both for the individual and the community, would be but meagerly supported both as to quality and number of students and the money necessary to conduct them.

I conclude, therefore, that for the present we must be satisfied with good professional instruction in educational history and principles, supported by a fundamental study of the psychological and social sciences; and with such practical instruction as may be gleaned from high-school visitation or gained by occasional cadetship in public high schools. Tho this may not be all that is desirable in the professional preparation of teachers, it is a great deal more than we have ever had.

VI

PAUL H. HANUS, PROFESSOR OF EDUCATION, HARVARD UNIVERSITY

What ought a high-school teacher to be, and what training should he have? He¹ should be a man of good personal qualities; and he should possess sound

¹For the sake of brevity the masculine pronoun only is used. The entire paper applies to women as well as men.

general scholarship, together with superior attainments in some one field of human learning including the useful arts or the fine arts; he should be an efficient class-room teacher and manager of pupils; he should have a professional outlook or horizon; he should ultimately become a leader in his profession, and a useful and helpful influence in the community where his lot is cast.

PERSONAL QUALITIES

1. Some persons ought never to be teachers. Hence, it is our duty as guardians of the teaching profession to keep such persons out of that profession if we can, whatever their training may be; as well as to encourage and even, on occasion, to persuade others to enter it.

To say nothing of such disqualifying and almost unmentionable characteristics as habitual untidiness in person and dress, and chronic bad taste, it is clear that one who has an inborn incapacity for good sense or fine feeling; persistent bad manners; an irritable or gloomy or despondent disposition; a stolid or sluggish mind, incapable of intellectual enthusiasms and a healthy, discriminating optimism; a narrow view of men and affairs—that one who is a mere bookworm or a pedant; or an intellectual or moral prig, incapable of winning or holding the respect or regard of his colleagues or his pupils, an egotist, or a self-seeker—it is clear, I say, that one who is unmistakably burdened with one or more of these disqualifying characteristics ought to be kept out of the teaching profession.

On the other hand, it would be absurd to set up requirements impossible of realization. What we want, first of all, in candidates for the teaching profession are the qualities that mark the gentleman and the lady; then we want physical vigor, moral health and strength, and intellectual attainments and power. In other words, we want good personal qualities, good health, and good general and technical education. If, in addition, we occasionally secure the “born teacher,” we shall be as happy as members of other professions are when the occasional *rara avis* appears. In what follows, good personal qualities in the prospective secondary-school teacher are assumed. My task is to set forth in some detail what the preliminary training of such a person should be to insure a good degree of efficiency at the outset of his career as a teacher, progressive skill in teaching, and a broadening and deepening interest in and insight into his profession—such a training as we may reasonably expect will promote increasing professional usefulness, in the broadest sense of that term, as time goes on.

SCHOLARSHIP

2. The first element of the teacher's professional equipment is adequate scholarship—scholarship that is at once broad and deep. This general proposition is, of course, a commonplace. But the sort of scholarship here meant is of such fundamental and far-reaching importance and is so often wanting in high-school teachers, that one need not hesitate to discuss it in some detail. The secondary-school teacher's scholarship must be broad in order that his

intellectual sympathies may be broad; in order that he may have an appreciative insight into the resources that he *and his colleagues* have at their command for the appropriate education of every pupil committed to their charge; and his scholarship must be deep enough in some one field in order to enable him to reveal the sense of mastery, the intellectual enthusiasm and power to bring about results, that kindle the same intellectual emotion and the same consciousness of growing power over difficulties in his pupil. The secondary-school teacher, more than any other, must impart richness and breadth to his subject, no matter what it is. His pupil is old enough to appreciate the best he can give him; and unless checked or disappointed, he is usually keen enough to demand, or at least desire unceasingly an extension of the meaning, implication, and application of the results of his own study—of the significance of all he learns. And this demand or desire only the well-equipped teacher can meet.

Not all pupils, it is true, manifest this eagerness to learn, and some are easily satisfied when they do. But a goodly proportion of the pupils have it and in most of them it can be aroused. Once started, it tends to grow. Whether it does grow or not depends on the teacher. Beauties in literature or art not perceived by the pupil, or meanings unsuspected by him; the unsolved mysteries of science as well as its known wonders and established laws, and its far-reaching applications; the fascination of mathematical truth, reasoning, and investigation in elementary as well as in advanced mathematics, together with the never-ending practical applications of mathematics, in science and in the industrial and constructive arts; the constant bearing of history on the development of right conceptions of American public service; the processes and products of manual training, always interesting in themselves but capable of an interpretative significance that insures economic enlightenment and interest—to enable the pupil to realize these and other illuminating, steady-ing, and inspiring influences is the privilege and the duty of the high-school teacher. And this duty cannot be adequately discharged by one who does not himself possess in full measure the resources of the subject he teaches.

To make this discussion specific, let us inquire now what ought to be the essential minimum of academic training which a high-school teacher should possess.

That our future high-school teacher should secure a good high-school and college education goes without saying; he must secure an equipment in scholarship at least four years in advance of his most advanced pupils. To this general proposition, I take it, every one will agree. But it will be necessary to examine this proposition more in detail.

Every well-educated person should have, first of all, a good high-school education, such as is represented in substance by preparation for admission to a good American college (provided the college allows a considerable range of choice in the studies that may be offered for admission). If all the best American colleges were ready, as they should be, to accept for admission any

work well done, and covering at least a year of four periods of prepared exercises per week, we could say that each pupil's work should cover at least one year's work in each of the studies enumerated below as "prescribed studies," together with two or three additional years of work in those studies (or groups of studies) which he prefers, as will be pointed out farther on. Since we have not yet attained the educational millennium, we should approximate the general scheme proposed in the following paragraphs as closely as possible.

PREScribed STUDIES

(The figures mean so many class exercises per week. Double periods are to be understood for the sciences, when laboratory work is required.)

PREPARED CLASS EXERCISES

English	3
Foreign language	4
Mathematics:	
(Algebra and geometry)	4
Physical geography	3
Physics	3
American history	3
Economic history or economics	3
Government (civics)	3 26

UNPREPARED CLASS EXERCISES

Manual training and drawing	3
Drawing and the history of art	2
Music	2
Physical training	8 (2 each year.)
	<hr/> 15 41

From the offering of a good high school the pupil should be required to choose, in addition to his prescribed studies, thirty-four periods of prepared exercises, if he desires the diploma of the school. These thirty-four additional periods should be so chosen that they are devoted chiefly to deepening and extending his knowledge and power in a small number of studies or groups of related studies already undertaken. Such a scheme of work seems to me to guarantee both necessary breadth and thoroness, so far as these terms are applicable to high-school education. Now breadth and thoroness are the essential characteristics of a future teacher's scholarship. This program is accordingly well adapted to the needs of future teachers.

3. On this basis our future teacher begins his college work. When he goes to college, he will select his studies on the same general principles that determined his choice of work in the high school. If he has not had this satisfactory precollegiate education, if his precollegiate training has been too narrow, say, he will naturally have to sacrifice some of the time he would otherwise devote to his specialty to such studies as will give him sufficient breadth of training. If, on the other hand, his precollegiate training has been too widely dispersed, he will be unable to make such progress in his specialty in college as is here suggested. But neither of these things should

happen in good high schools. That they do happen is an evidence of lack of insight and aim on the part of the high-school teachers.

For illustration, I select three typical schedules of study from the number that might be given—one for a teacher of English, one for a teacher of classics, and one for a teacher of physics. Each schedule represents the essential minimum of academic training a high-school teacher of the subject named should possess. Each of these schedules fills the entire time of an undergraduate working at the rate of five full courses (i. e., five studies at a time) each year—and no real student ought to attempt more.

No provision is made in these schedules for the study by the prospective teacher of his profession. As this study is just as fundamental as the teacher's study of "academic" subjects, it is clear that, in my view, undergraduate study for the teacher is not enough. The essential minimum—about four full courses—of professional study, without which a young high-school teacher should never be recognized as such, is accordingly assigned to a year of graduate study. Since, however, it will be impossible, for some time to come, to insist on this graduate year in practice for all high-school teachers, those who find themselves obliged to restrict their training to their undergraduate careers, ought to be required to take this essential minimum of professional studies as undergraduates. What this essential minimum is, is given below. Such a compromise between what ought to be and what can be reasonably demanded should, however, be recognized as temporary, and to be outgrown at the earliest possible moment.

For a teacher of English—The student enters college with three years of English, four of Latin, two of Greek, two of German, and one year of French. This is a good linguistic preparation for the prospective teacher of English. If he is less well equipped with Latin and Greek, but has had better training in German and French, he will naturally give more time to the classics and less time to modern languages, than is suggested below. But his training in classics (in the high school and college together) ought never to be less than four years of Latin and two years of Greek. It is, of course, possible to enjoy English literature without some knowledge of the classics. But if a would-be teacher of English has had no classics at all in his précollegiate training he must at least know Greek and Roman literature thoroly in translation. Even so, however, he will find himself handicapped at every turn because he lacks the elementary philological training, without which thoro understanding and appreciation of English are impossible. That a teacher of English ought to possess such understanding and appreciation goes without saying. Hence, the scheme recommended seems to me a safe basis for general guidance.

SCHEDULE OF COLLEGE STUDIES FOR A TEACHER OF ENGLISH

FIRST YEAR

English
English

Rhetoric and composition
History of English literature. Anglo-Saxon period to the present day

Latin	¹ Literature. Horace: Odes and epodes; Livy, Terence, Andria, and Phormio: or, Tacitus: (Annals I-VI); Catullus: Selections; and other poets; Horace: Satires and Epistles
Greek	¹ Literature. Homer: Odyssey, Phaeacian episode; Euripides and Aristophanes: scenes from selected plays. Or, Plato: Apology, Crito; Lysias: selected orations; Elegiac, Iambic and Lyric Poets: selections; Euripides: Iphigenia among the Taurians. Lectures on the history of Greek literature.
History	English.

SECOND YEAR

English	Advanced composition
English	Seventeenth-century literature
German	Literature and composition
French	Literature and composition
Science	Physical geography or geology; or a half year of botany and a half year of zoölogy

THIRD YEAR

English	Debating and public speaking
English	Chaucer
German or French	Literature and composition
History	Mediaeval
Sociology or Economics	General principles

FOURTH YEAR

English	Shakspeare
English	Nineteenth Century
History	American
Philosophy or Psychology	History of modern philosophy or psychology
Fine arts	Mediaeval and Renaissance

For a teacher of classics—The student enters college with four years of English, four of Latin, three of Greek, and at least one year of German and one year of French. It is usually impossible to accomplish this desirable preparation, together with other work a high-school pupil ought to do, in four years, and it ought not to be attempted. It can be done in five years, however.

SCHEDULE OF COLLEGE STUDIES FOR A TEACHER OF CLASSICS

FIRST YEAR

English	Rhetoric and composition
Latin	Livy, Horace, Terence
Modern Language	Literature and composition
History	Ancient or mediaeval
Science	Physical geography, or geology; or botany and zoölogy

SECOND YEAR

English	History of English literature
Latin	Virgil, sources and literary influence

¹ The alternatives are to be chosen in accordance with the pupil's preparation.

Greek	Plato, Xenophon, Lysias, Euripides
Modern Language	Literature and composition
History	Modern European or English; or life of the ancient Romans

THIRD YEAR

English	Study of a period of English literature; or
English	Shakspeare
Latin	Tacitus, Catullus, Horace
Greek	Demosthenes, Aeschines, Aeschylus, Sophocles, the life of the ancient Athenians
History or Government	American

FOURTH YEAR

English	Nineteenth-century literature
Latin	Composition, one-half year
Greek	Composition, one-half year
Greek	The life of the ancient Greeks
Fine Arts	Mediaeval and Renaissance
Philosophy or Psychology	History of modern philosophy, or elementary psychology

The emphasis on Latin in this course is slightly greater than on Greek, because relatively few teachers of classics in schools are called upon to know Greek as well as they know Latin. But the principle is recognized that a teacher of either of the ancient classics must have well studied the other.

For a teacher of physics—The student has offered among his admission subjects advanced algebra, solid geometry and trigonometry, elementary physics, and at least two years of one modern language, either German or French.

SCHEDULE OF COLLEGE STUDIES FOR A TEACHER OF PHYSICS

FIRST YEAR

English	Rhetoric and composition
German or French	Literature and composition
Mathematics	Plane and solid analytics
Physics	Experimental physics, or general descriptive physics
Chemistry	Physical chemistry

SECOND YEAR

English	History of English literature
French or German	Literature and composition
Mathematics	Calculus
Physics	Advanced course in experimental mechanics (one-half year)
Physics	Light: Laboratory course (one-half year)
Physical Geography or Geology	
Drawing	Projections and machine drawing

THIRD YEAR

History	Modern European, or English
Physics	Laboratory course in electricity and magnetism. Measurements
Physics	Heat (one-half year)

Shop Work	Construction and repair of physical apparatus (one-half year)
Astronomy	Descriptive and practical astronomy
Sociology or Economics	General principles

FOURTH YEAR

History or Government	American
Physics	Generation, transmission, and utilization of electrical energy
Physics	Thesis on a special problem
Fine Arts	History of
Philosophy	History of modern philosophy or psychology

PROFESSIONAL STUDIES

4. So much for our student's general and special scholarship. The very fact that he is to be a teacher implies that he must be something more than a scholar, important as scholarship is. Scholarship is for him not only an end in itself, but a means to an end—that end being the use to be made of it in the interest of his pupil. This interest includes the exceedingly important discovery of the pupil's dominant tastes and capacities and the progressive shaping of his education in accordance with that discovery.

This conception of the teacher's scholarship as an instrument in his hands for the good of his pupil is the teacher's conception, not the scholar's. To endeavor to attain it is the duty of every teacher. Ultimately it will determine his permanent attitude toward his work as a teacher—not merely to this or that part of it, but all of it.

Now this professional attitude is very rarely the outgrowth of scholarship alone; indeed, scholarship may even prevent its development. Very few young graduates have even an inkling of it; and most young doctors have been prevented from acquiring it by highly specialized "research" in the field of pure scholarship. While these men are studying for their degrees, scholarship is only an end in itself. Incidentally, if they are preparing to teach, they know, of course, that scholarship is an indispensable part of their professional equipment. But this knowledge alone is quite as apt to promote a wrong attitude toward their work as a right one. It often leads a young scholar to regard the work of teaching as a necessary evil, to be borne only because it may enable him to pursue further the research which he loves. When this does not happen, when he really applies himself with some zeal to his work as a teacher, it often leads to an exaggerated or at least disproportionate estimate of the educational value of his specialty, and to corresponding indifference to the educational value of other studies. And the greater the degree of specialization, the greater the danger is. This is one reason, I suppose, why the doctor of philosophy who wishes to teach in a high school is sometimes justly regarded with suspicion by principals and superintendents. And it is doubtless also one reason why the German states require would-be secondary-school teachers to pass examinations in three fields of study—one

"major" and two "minors;" and also why relatively few German secondary-school teachers have secured the doctor's degree.

a) My point is, once more, that the teacher is not merely a scholar, important as scholarship is. To be available for teaching purposes, scholarship must have been acquired or at least overhauled from the teacher's point of view. The scholar must possess his scholarship in a new way. He must examine it with a view to attaining a clear conception of the *educational resources* of his specialty and an equally clear recognition of its limitations. He must, for example, have a definite answer to these two questions: (1) what ought the pupil to get from this subject under my guidance; and also (2) what can he by no possibility derive from it? The teacher of history, for example, may expect his pupil to derive from history social insight and interest, and some political enlightenment. But it is clear that social insight and interest, and political enlightenment do not constitute more than one element of the complex whole we mean when we speak of a good citizen; to say nothing of the fact that, at a given time, even social insight and political enlightenment cannot be secured thru history at all, owing to the pupil's immaturity, or unawakened social and political comprehension. Hence, the teachers of mathematics, science, languages, the mechanic arts, and the rest, have important subjects to teach as well as the teacher of history; and at a given time any one or several of them may be able to secure for the pupil a more adequate revelation of the world and a clearer self-discovery of the pupil than the teacher of history can secure. That is to say, the history teacher's business is to see that the world is revealed to the pupil from the historical point of view, while recognizing the worth and efficiency of other studies to the final end at which all are aiming—the pupil's knowledge of the world and of himself, and a command over both appropriate to his age and opportunities. The history teacher will thus realize that this historical revelation of the world, important as it may be in itself, is not the whole revelation. Just what this historical revelation is in its breadth and depth, it is the history teacher's professional duty to know; for this knowledge will determine nothing more or less than his *conscious aims* as a teacher—will determine the richness or poverty of his teaching, and the significance or want of significance of the subject for his pupil.

It thus appears that conscious aims, clearly and discriminatingly defined, constitute an important part of the teacher's professional equipment, and that scholarship alone cannot be relied upon to supply them, although it is impossible to realize them without scholarship. How are they developed? This question will be answered presently. But first something more needs to be said about them.

By implication it is already clear, from what has gone before, that the teacher's aims are both general and special. Up to this point, however, the teacher's special aims—i. e., the results he hopes to attain through his specialty—have received most attention. But his responsibilities do not stop with a

clear conception of what the pupil should learn of a given subject under his guidance. He must know *how to teach his subject so as to realize his aims*. He must also understand his pupil as a child and youth and not merely as a pupil of history, or literature, or science, or manual training; he must be able to guard and promote the physical as well as the mental and moral welfare of his pupil; and he must be able to estimate the significance and value of the work of the school as a whole in providing for its pupils the most salutary physical environment, and appropriate participation in all the worthy interests of life, i. e., satisfactory preparation for the pupil's maturity, for his work and for his leisure.

The teacher must therefore know how to teach and manage children and youth, must know the nature of children and youth, and the conditions of their satisfactory development; he must know whether the school in which he works is adapted to the ends for which it exists—in a word, he must have professional insight, interest, and skill in his own work, and he must have a professional horizon wider than his classroom, or his school.

b) The teacher's special aims and his power to realize them—his technical skill and his general professional insight and interest, and his professional horizon, he can derive only from the study of his profession. The lawyer, engineer, or physician has professional insight, interest, and skill which everyone recognizes, appeals to in case of need, and respects as valid when obtained because each of them bases his professional career on a body of organized facts and principles pertaining to his profession and on an incipient command over them, and he perfects this knowledge and skill by practice. That is to say, each enters on his chosen calling with a developed professional attitude i. e., with a knowledge of his professional responsibilities, and developed confidence in his power to discharge them. Such an attitude must be based on a prolonged study of the resources and the problems of his profession, and as much practice as possible in formulating legal advice and pleading cases; in making plans for routes, structures, or machines, and in executing those plans; in diagnosing bodily conditions, and prescribing treatment.

Now the teacher's educational aims, insight, interest, and skill and his professional horizon—the range of his professional efficiency—determine his professional consciousness, just as the corresponding equipment of the workers in other professions determines theirs. Such a professional consciousness is the professional attitude. It is the outgrowth of consciously possessed and tried resources. It makes the worker painstaking; prompt without precipitation; aware of the difficulties that beset his path, but courageous in meeting them; willing to experiment but not without adequate cause; judiciously aggressive in proposing new policies, and able to defend them convincingly in the face of all kinds of opposition.

Such is the desirable attitude that we have a right to expect every teacher to attain. That too many teachers now in service have it not is due to the fact that they have not taken pains to acquire it, they have not seriously studied

their profession. Until they do, it is impossible to expect that their employers or the general public will acknowledge their superiority over the lay public in matters educational; for, in general, no such superiority will exist.

Of what, then, does the teacher's study of his profession consist? First of all, as has been said, the teacher must know how to teach—he must command the technique of his art; he must know how to teach his subject and manage his class. At this point I may be pardoned a brief digression.

c) It is still believed by otherwise well-informed persons that any scholar is *ipso facto* a teacher, or, at least, that he can easily become a teacher—a good one—by practice only. (It would be more correct to say by floundering!) This view is held, with a conspicuous disregard for the testimony of experience, by many college professors, who are often called upon to recommend young graduates as teachers, and not infrequently by the employers of teachers—particularly private-school or endowed-school principals and trustees. In this paper there is no need to combat this error; and I content myself with reminding you, once more, in passing, that in spite of recent progress, it still persists—it still interferes with the development of *training in teaching* in our colleges and universities. Inasmuch as colleges and universities are the source of supply of the great majority of our high-school and private-school teachers, the persistence of this error must be reckoned with when we seek to secure proper training for high-school teachers.

But to return. Everyone, whether superintendent, principal, teacher, or layman, knows that bad teaching defeats the very ends for which the schools exist and is the source of enormous waste of money, time, and strength. It makes the most attractive study dull; bewilders, misleads, and repels the most earnest and capable pupil, and so, as just intimated, perverts the educational opportunity willingly and generously provided by the public, or expensively maintained by private means.

These are obvious commonplaces. But it will be necessary to insist on them until our college-bred scholars and specialists, and many of those who employ them as teachers, as well as most of those who recommend them for employment, finally divest themselves of the traditional error already referred to that scholarship and particularly specialized scholarship, involves teaching power as a matter of course. As long as this traditional error persists in spite of the evidence of experience—for I venture to say that no single fact of the high-school teacher's equipment for his work has been so often established by experience as that scholarship and teaching power do not necessarily go together—it will be necessary to insist that teaching power, like scholarship, must be acquired with painstaking care. True there are "born teachers" whose native gifts enable them to teach well without instruction; but most teachers in the past have not been born teachers, and most of them never will be. In the teaching profession, as in other callings, the genius is found only occasionally; and even he gains enormously by the careful study of every detail of his art or his profession. It is plain that the world's teaching must be done in the future

as it has been in the past, not by geniuses chiefly, or even largely, but by persons of ordinary endowments; and experience has shown that all such persons need to make the most of their natural gifts, whatever they are, by careful training.

The young graduate without technical training will naturally follow the example of his college teachers, since their teaching is fresh in his memory. If those teachers happen to have been good models, the neophyte of good natural teaching power will, ere long, beat out a fairly successful routine, although at the expense of his pupils, and more or less damage to his subject. If a young language teacher's model, for example, has emphasized the philological aspect of his subject rather more than its literary content and form, his pupil—our young teacher—will be likely to overemphasize the same thing in his teaching, in spite of the well-known fact that literature and not the refinements of syntax and long excursions into comparative grammar attracts most high-school pupils; if his model has been an inspiring literary interpreter as well as a reasonable grammarian, our young teacher will similarly be likely to address himself by preference to literary interpretation. The fact is, however, that without specific instruction in the various educational resources of his subject, the educational possibilities of that subject are not consciously recognized; and, what is even more important, the varying educational values of those resources are not seen to differ from each other, and to have varying values for different pupils. For example, I once heard a secondary-school teacher spend nearly the whole of one class exercise on three illustrations of a very unusual use of the ablative case by Cicero—one of the three having occurred in the lesson of the day.

So the prospective teacher must be led to overhaul his scholarship from the teacher's point of view, in order to become aware of its educational possibilities and their relative importance; and then he must secure a training in theory and practice that will enable him to work systematically and progressively toward realizing these possibilities in his teaching. Such training, when successful, develops the first requisite of a professional attitude, an attitude which, as has been said, is dependent on the consciousness of power to teach and incidentally, to govern pupils and classes, an incipient command over the technique of the teacher's art. This training naturally consists of directed observation of good teachers, instruction in methods, and carefully supervised practice teaching in the classroom, under normal conditions.

5. But, as has been said, to teach and govern well the teacher must know his pupils as well as the art of teaching and governing. He must know the fundamental characteristics of children and young people, in order that he may more appropriately become their guide and interpreter, and not merely their judge and taskmaster. And, of course, he must acquire the habit of studying every pupil, for his interpretation and guidance are effective only when they meet the needs of each individual. The teacher must, therefore,

learn as much as possible about the nature of children and young people, and he must acquire the habit of studying each individual, and of shaping his instruction and management in real harmony with both the general nature of children and youth and the particular characteristics of each pupil. That is to say, he must acquire the attitude of the trained and sympathetic student of the minds and hearts of all his pupils, and their individual responses to his influence. Incidentally all his professional training promotes this end. But it is directly arrived at in courses on educational theory (general principles of education, school hygiene, and educational psychology, particularly the psychology of mental development in children and adolescents).

6. But the teacher must also have a professional horizon. He must know his school as well as his class. He must see his own work in relation to that of his fellow-teachers; he must be able to co-operate with them, for the pupil's sake, on the basis of a good mutual understanding of the total aim, atmosphere, classwork, and collateral activities of the entire institution as an educational force; and he and they must be able to work together for the progressive readjustment of the educational opportunities the school affords, and the results it achieves to the actual needs of the pupils and of the community, as they appear. That is to say, he must study the high school as a social (educational) institution. He must know its origin and its development. From its vicissitudes he will learn much that will enlarge his professional horizon, and make him a more intelligent and constructive critic of its present organization, its relation to the elementary schools and to the college, and its actual contemporary efficiency. Such training should be given in a course providing for a thoro study of the secondary school, particularly the public high school.

7. But the teacher's professional horizon is still too narrow if it is limited to the educational activities of his own school and his own time. His profession has a remarkable history, of great intrinsic interest and professional significance. The history of education is the history of culture. It covers the varying educational ideals of important periods in the history of progressive nations, the social (political, religious, economic) conditions which gave rise to these ideals, and the institutions devised to embody these ideals, up to the present day. These ideals are also embodied in educational writings, and these are accordingly sources of fruitful thinking on educational theory and practice. To study the history of education is, accordingly, to pass in review the world's thought and activity in the field of education, and to reflect critically on its adequacy as measured by the standards adhered to in any particular period. To do this is to acquire a professional horizon that extends far beyond the confines of a particular classroom or school, and inevitably promotes the habit of applying thoughtful consideration to all educational problems or activities—and this is, as we have seen, the professional attitude which we are seeking every proper means to secure for every teacher. A good course in the history of education is, accordingly, indispensable to the essential

minimum of professional studies every secondary-school teacher should pursue.

8. From the foregoing it is clear that this essential minimum should consist of the following four courses:

1. General Principles of Education, one-half year.
School Hygiene, one-half year.
2. Educational Psychology, one-half year.
Methods, and Practice Teaching, one-half year.
3. Secondary Education—Particularly the Public High School, its Origin and Development; Relation to the Elementary School and to the College; Present Aims, Organization, and Work. Foreign Secondary Schools.
4. History of Education from the Time of the Ancient Greeks to the Present Day.

It is clear that a teacher's training is only well begun by such a course of study as has been outlined in the preceding pages. His growth must continue with the practice of his profession if he would continue to be efficient as a teacher, and increasingly useful as a member of an important profession whose interests he ought to be able to promote by his example, his voice, and his pen; and if he would be counted among those who not only render efficient vocational service, but can be relied on to co-operate with others in at least one of the many community interests lying entirely outside his vocation.

Thru the teacher's ministration the pupil is to be led to understand and enjoy this wonderful world of ours—to possess some command over its resources, to find in it the particular thing of worth that he likes best, and to look forward to the kind of work that he can do best. The pupil is to acquire knowledge and the power to use it; his heart is to be touched and taught to respond habitually to noble emotions of "virtue, honor, love, courage, and magnanimity;" he is to see and love beauty as well as noble emotions and goodness; he is to be trained to act in harmony with his insight, his warm heart, and his cultivated taste; and so to be and do his best in everything he undertakes. This is the teacher's ideal. All would like to approximate its realization, and few indeed would not try to realize it as nearly as possible, once it is seen. There are many teachers fortunately who cherish such an ideal, consciously or unconsciously, and who adhere to it and maintain an attitude of discriminating optimism amid all the trials, misunderstandings, discouragements, and disappointments that fall to the lot of every worker. Such teachers rejoice in their partial successes and derive from them the courage and good will that make for ever increasing efficiency. These are the chosen few—chosen by nature and a fortunate combination of circumstances to do the teacher's work.

Unfortunately, however, the conditions under which too many teachers carry on their work are a constant menace to the maintenance of the teacher's ideal, and not a few who have it at the start harden under them. Under the stress and strain of a deadening routine for small pay, or an unappreciative public, or narrow or ill-bred official supervisors, or some or all these combined, such teachers are in danger of losing the inspiring influence of their ideal, and

of forgetting it entirely. In any case, every teacher's inspiration is derivable from two sources—his equipment of scholarship and his professional insight, interest, and skill; and we cannot urge too strongly or too persistently the appropriate recognition of the training on which this inspiration depends until it ultimately wins, wherever found, thoro appreciation and appropriate material rewards.

VII

E. O. HOLLAND, JUNIOR PROFESSOR OF EDUCATION AND HIGH-SCHOOL VISITOR,
UNIVERSITY OF INDIANA

1. The last few years of the nineteenth century will be noted as the time for a new and widespread interest in secondary education. In the past, educators have given their attention to the problems of the common graded schools and the college and the university. As a consequence, the elementary and the collegiate work have been well developed and been placed in the hands of specialists. It was not until about fifteen years ago that the secondary-school problem was able to demand the serious thought of the educational leaders. In the year 1890 was held the December Conference at Berlin. Four years later the Committee of Ten made its extremely valuable report. Within another year, the English Parliamentary Commission on Secondary Education concluded its investigations. In 1899, the Committee on College Entrance Requirements gave the results of its work. During these years, every state teachers' association has found the secondary-school problem one worthy of its serious and persistent consideration. As the late President Harper well said, "Wedged in between the great common-school work and the higher work of colleges and universities, its prominence in the past has not been commensurate with its importance." But this condition has been modified, and as a result, of all the educational advances made during the early part of this century, none will surpass that in secondary education.

The growth of the high schools during the past fifteen years has been phenomenal, for the enrolment has been nearly trebled. In 1889-90 the secondary schools enrolled 297,894, and in 1903-04, 822,000. This increase has been most marked in the Middle West in connection with the public high schools, and least marked in the private eastern academies. Yet the increase has been so great thruout the entire country that it must be called a national movement. From President Eliot's report we find in 1891 that 128 public high-school students entered Harvard; in 1900 there were 212, showing an increase of more than 65 per cent. In 1891, 147 students entered Harvard College from private schools; in 1900, there were 105, showing a decrease of over 28 per cent. Many of the great western colleges and universities have been enrolling thousands of young men and women, practically all of whom have been prepared in the public high schools. The growth in the high schools has made possible the rapid growth in institutions of higher learning. Yet notwithstanding this vast army of young people that pass each year into

the doors of our colleges and universities, the great majority of secondary-school students never enter an institution of higher learning. Since this is true, it means that the secondary school has a peculiar function, and in the language of Dean Russell, that function "is the selection and training of leaders for intelligent service in academic, professional, and industrial life." The high school of the twentieth century is not to be considered a preparatory school; it has its own specific work to do. It should reinforce the true democratic spirit in our government; it should arouse in each pupil both an intellectual and an intelligent interest in life; it should develop him along the lines of strength so he can render to society the greatest possible service. Dr. Hanus has said,

Most of our editors, politicians, skilled mechanics, and labor leaders, our leading business men, and even the great majority of our professional men and women, are not college bred; but they have usually had a secondary-school training. These people are commonly the leaders of the people.

Since, then, the American high schools have a distinct function, and since they have such an intimate connection with the social, intellectual, and industrial life of the whole people, we should assume that the question of professional training for secondary teachers should be one that has received the most careful consideration. It is true that in recent years our educational leaders have thought and written a great deal upon this subject, but today we find that the vast majority of school committees are indifferent to this important problem, and that the secondary-school field is very largely in the control of inexperienced, unskilled, and incompetent teachers. The facts collected a few years ago by Superintendent Crum, of Madison, Neb., throw light upon this assertion. Beginning with September, 1896, there were at work in the Nebraska high schools 454 teachers, in 1905 only 74 remained. Here are the statistics by years:

September, 1897, 190 new teachers entered the work; 1905, 27 remained.

September, 1898, 192 new teachers; 1905, 25 remained.

September, 1899, 169 new teachers; 1905, 34 remained.

September, 1900, 178 new teachers; 1905, 29 remained.

September, 1901, 162 new teachers; 1905, 42 remained.

September, 1902, 188 new teachers; 1905, 62 remained.

September, 1903, 188 new teachers; 1905, 90 remained.

September, 1904, 198 new teachers, making 583 in those positions.

Superintendent Crum discovered that over 33 per cent. of the total enter these important positions every year, and that over 67 per cent. of these teachers have been at work for less than four years.

These statistics are indeed startling, but, in a large measure, they are no more so than those to be obtained from any other state in the Middle West. These facts would seem to prove my assertion that most of the secondary-school teachers are inexperienced, but is it true that they are, as I have charged, unskilled and incompetent? In 1901, Professor M. V. O'Shea received reports from one hundred high-school principals and school superintendents

concerning secondary-school teachers, and, to reinforce this evidence, he carefully examined the records of one thousand inspections of secondary-school teachers. Here is what he discovered:

1. The university graduate has no just conception of what a high school ought to accomplish.
2. He has little sympathy at the beginning with the kind of work the high school must do.
3. He has little appreciation of what should be the right relation of his department to the other departments in the high school. He tries to monopolize all the time, and to crowd out other subjects, for he has not given thought to the relative value of the high-school branches. His last two years at the university led him to think that his specialty is the only subject to be taught in the secondary schools and beyond.
4. He gives special and technical work before the pupils have any idea as to the scope of the subject.
5. His tendency is to talk too much, to lecture to the pupils, and lecture he does regardless of the impracticability of the plan.

Spiritless teaching is the greatest fault to be found in the majority of these cases. The second fundamental fault is the narrowness of view. Pupils cannot see the bearing of the questions. The teacher fails to arouse delight and enthusiasm. Of course that kind of teacher is certain to have difficulty in discipline. Because of his inefficiency many pupils fall behind in the work and quit school forever. Such instruction, of course, is a costly business for the people. It decreases the efficiency of every high-school student, and, in many instances, it perceptibly lowers the moral and intellectual life of a community.

I think I have not made the case worse than it is. How are we to improve this condition? How are we to make the secondary schools equal to the important task they have to do? Of course the answer is that we must get the people to demand that the secondary-school teacher make a preparation that will equip him to meet the needs of the school. And we must get the people to be willing to pay for such service; for the high-school teacher should have the opportunity to do good work, to receive a reasonable salary, obtain advancement as a reward for excellent service, to be given social recognition, and to be secure from unfair attacks from the public. In a large measure the possibilities in the secondary-school field should be comparable with those to be found in the other professions. When this condition obtains, the best high-school teachers will remain in the profession and the poor ones will drop out because of the stronger competition. Then the high schools of the country will be able to wield a powerful influence on the life of the people. Improvement in the secondary-school work will come first of all from the efforts of the colleges and universities, and from the public-school leaders of the country.

During the fall of 1906, I sent out a questionnaire upon the general problem of professional training of secondary-school teachers, and with a query concerning the local condition and how this condition could be improved. I compared the forty replies received from the leading college and university

educators with those statements made by the same number of the leading college and secondary-school men of Indiana. I was especially impressed with the fact that the needs seem to be the same thruout the whole country. From one point of view this is not a misfortune, for we can approach the general problem with the approval and support of all sections of the United States. Practically all of the educators insist that the secondary-school teacher should possess four qualities: (1) general knowledge; (2) professional knowledge; (3) special knowledge; and (4) real skill in teaching.

2. From the answers to my questionnaire, I infer much difficulty is found in attempting to solve the fourth need and requirement—the development of real skill in teaching. All of us agree that the preparation of the secondary-school teacher cannot be satisfactory or complete until, in a practical way and under normal conditions, it includes actual experience in teaching. Only a few of my replies favored the establishment of a training-school in connection with the college or university because of the great expense and the difficulty in making such a school practical and attractive to any large percentage of the college students. Most educators seem to favor an affiliation with a nearby high school, where opportunity can be given the students of the department of education to observe skilful teaching and to take charge of classes under the direction and supervision of efficient teachers. Another plan that has been favored widely is that of sending out seniors, during the college vacations, to do work in some of the best schools of the state. Such a plan would enable the regular teachers to observe work in their own and neighboring schools—an opportunity today they seldom have. Some such plan, I believe, will in the future be used widely by many of the best city superintendents, who can thereby fill vacancies with less trouble and risk; and the pupil-teachers, having such experience, will be able to teach much more satisfactorily when given a permanent place the following year.

3. Already the departments of education in most of the institutions in the Middle West require the completion of a prescribed course, which includes work in the history and the philosophy of education, in educational and genetic psychology, secondary-school management and teaching, and in observation and practice.

As Dean Russell has stated:

The lowest requirements which can consistently make for such a diploma or certificate, are as follows:

a) The candidate must be a college graduate, at least when he receives the diploma if not when entering upon the course, or have the equivalent of a college education.

b) He must satisfactorily complete courses: (1) In the history of education; (2) in the philosophy of education; (3) In school economy, especially school hygiene—an allotment, say, of eight hours a week throughout one year.

c) As evidence of special knowledge in each subject in which a diploma is sought, the candidate should be able to show the equivalent of at least three years' collegiate study of the subject. . . . Such a course may very properly be conducted wholly or in part by the university department, which is responsible for the academic training in subject matter.

d) The candidate must be given opportunity to observe good teaching, study its method under guidance, and finally give instruction under normal conditions long enough to demonstrate his ability to teach.

"The lesson from German experience is that to liberal culture you must add special scholarship, and to special scholarship, professional knowledge, and to professional knowledge, teaching skill."

Here is the ideal toward which we are striving, tho we understand that there are many steps to be taken before it can be realized. In the Middle West the leading city superintendents are urging their teachers to go back to the college or the university for a year and take courses in education. Where the best salaries are paid, the school authorities can demand and obtain well-trained teachers. Those school communities which pay low salaries generally get poorly prepared or inexperienced teachers; the teachers that become efficient are quickly transferred to some other place paying better and offering more opportunities, and so those communities are left with teachers that probably earn the pitiful salaries paid.

4. In the Middle West the accrediting system used by practically all the colleges and universities has been found to improve the conditions of the better and larger high schools. Most of the universities have high-school inspectors (in Indiana, the State Board of Education acts in this capacity), and they have set a certain standard to be met by the secondary school holding a commission. They require that the minimum scholastic attainment of all teachers in commissioned high schools shall be equivalent to graduation from a recognized college, and shall include special training in the subjects they teach; "the number of daily periods of classroom instruction should not exceed five, each to extend over at least forty minutes in the clear;" the laboratory and library facilities must be adequate to the needs of the instruction; "all schools whose records show an abnormal number of pupils per teacher, as based on the average number belonging, even tho they may technically meet all other requirements, are rejected." Thirty is considered the maximum.

Certainly, these are splendid rules, but this association of colleges and universities "has omitted for the present the consideration of all schools whose teaching force consists of fewer than five teachers exclusive of the superintendent." Tho this last may be a splendid rule to follow, it seems to me that the most important work to be done by inspectors is being neglected. In Indiana, the State Board of Education has commissioned 240 high schools, which leaves 527 non-commissioned high schools that are not inspected by the members of the State Board. This is the condition of practically every state in the Middle West, and it means that the schools that especially need direction and encouragement are ignored. If money is needed for inspection, it should be furnished, for we cannot expect to raise the standard of secondary education thruout the country unless we give practical aid and direction to more than one-third of the high schools.

VIII

C. H. JUDD, PROFESSOR OF PSYCHOLOGY, YALE UNIVERSITY

1. The preparation of a high-school teacher has never included as much attention to special methods as has the training of elementary-school teachers. Much greater emphasis has been laid in preparation for high-school work upon a broad general training and upon training in the special line in which the teacher is to give instruction. These practices of the past are being called in question at the present time by many who regard the work of the high school as inferior in method to the work in the elementary schools. Indeed, the criticism is very frequently made by superintendents and those who have charge of elementary work that the poorest teaching in the schools is to be found in the high schools. The criticism undoubtedly has some justification in actual experience, but in the opinion of the present writer the remedy is not to be found in the institution of normal schools for high-school teachers as has sometimes been suggested.

2. The fact is that the work of a high-school teacher is more general in character than the work of an elementary teacher, and, from the nature of the case, high-school instruction is less susceptible to general definition in point of its method. The high-school teacher is not called upon to drill in the fundamental forms of knowledge, his problem is rather to open up before the developing mind great bodies of information and new forms of thought. The individual with whom the high-school teacher has to deal is very much more of a distinct personality than is the child in the elementary school. Indeed, the characteristic fact about the high-school pupil is that he is reaching a stage in life in which he is differentiated by his development from those who are about him; he becomes clearly conscious for the first time of his own personal interests and his own personal place in the world. To deal with a class of high-school students in anything like an adequate way requires that the teacher shall have the keenest sense for the individual characteristics of the members of his class.

3. There is one statement from which there is not likely to be any dissent. A teacher in a high school should have a broad general education which carries him far beyond anything that he will be called upon to teach to his students. Put in the concrete this statement means that graduation from a college is the minimum requirement which can be tolerated in the case of a high-school teacher. If the candidate is not a graduate of a college he should be able to give evidence of at least the equivalent of a college course in independent study. It is not so much the formal compliance with the academical requirement as it is the study which is implied by an academical degree that should be considered. No young man or woman should present himself as a candidate for a position in high-school mathematics, for example, who has not mastered the higher branches of this subject. Nor should he present himself in science unless he has taken more than a freshman or sophomore course in physics

and chemistry. The high-school teacher must be qualified in the subject which he is to teach by a specialized study of this subject far enough to become acquainted not only with its elements, but also with some of its more advanced phases. If there is to be any limitation of training in preparation for high-school positions it should not be along these lines.

4. Not only should the high-school teacher be acquainted with the subject that he is to teach but he should also be acquainted with the institution in which he is to teach. More than for any other teacher is it essential for the teacher in the high school that he should understand the history and present position of the high school. This institution stands in the midst of our educational system; its influence upon the lower schools and upon the schools which are above it give it a central character and importance which has been felt very powerfully in the historical development of American education. One needs only to turn to the history of our middle schools by Professor Brown to recognize that the influence of these schools has been very large in determining the revision of the course of study in American colleges, and at the same time this influence has been very marked upon the development of the public schools, especially thru the preparation which the high school has given to many of the teachers in the elementary schools. To be sure it is very desirable that all teachers have some knowledge of the historical development and present condition of the schools, but the elementary teacher is more likely to be called upon to follow a line of teaching which has been marked out by the superintendent, and the college teacher may devote himself to his specialty and leave the problems of reorganizing the college curriculum to the forces which are operating thru the elective system and thru other general movements to determine the character and scope of college courses. No high-school teacher, on the other hand, can neglect, as he prepares his courses, the intimate problems of organization which come up in connection with his work. Our high schools would not be bound to traditions if there existed among high-school teachers a clear historical insight of the origin and character of the traditions which have, in a very large measure, determined the development of high-school courses.

We may assert, therefore, that a study of the history of education is essential to preparation for high-school teaching. There should be some instruction offered in our American colleges on the historical and institutional relations of the high school if colleges are to meet this second obvious requirement as fully as they meet the requirement which has been described above in discussing general training in the teacher's specialty.

There is a very general movement in American colleges looking toward the satisfaction of the demand here expressed for a historical course. Almost every institution is introducing a course in the history of education as an essential part of the curriculum for those who are to teach. It is highly desirable that his work be placed upon the same academical footing as the well-established courses in history in our colleges. The history of education has long

been required of German and French teachers in the higher institutions in those countries. It would be quite impossible to find among the teachers in the German *Gymnasium* or the French *lycée* anyone as ignorant of the movements in the history of education as can be found in every high-school faculty in this country. The course of history of education should not be a formal course such as is offered in many institutions. It should not be merely a course dealing with the educational reformers who have co-operated primarily in the development of elementary schools. It should be rather a discussion of the whole development of educational institutions, including especially the higher schools. Such a work as Paulsen's on the higher schools in Germany should be prepared for the special use of colleges.

5. A third requirement which should be made upon the student who is preparing to teach in the high school is that he prepare himself to treat in a thoroly scientific way the individual problems which confront him in the person of each pupil and in each new phase of the presentation of his subject. Much could be said in favor of a modification of the requirements imposed upon teachers in the elementary schools, so that they also shall be trained, not in special methods, but in the general scientific method of treating all educational problems. Yet if the elementary teacher adheres strictly to the same elementary method of procedure, he will not go so far astray as will the high-school teacher who attempts to deal in a stereotyped way with the highly individualized pupil of the high school. Too great emphasis cannot be laid upon the fact that every high-school problem is a distinct problem requiring a distinct and intelligent mode of treatment. The teacher who has not cultivated flexibility of sympathy and procedure should have no place in a high-school faculty. When a boy or girl shows inability to grasp a problem from one point of view, there is certainly no justification for a reiteration of the method which has failed and an effort to make the individual child conform himself to this ordinary method. The teacher should be prepared to meet the intellectual difficulties of a high-school student with a flexible method. His problem is therefore essentially a scientific problem. It consists in investigating the case in hand and meeting it exactly as a trained scientific engineer would meet his problem. No general rule can be laid down for the building of bridges. The suggestion which has been made above, that the high-school teacher become acquainted with the historical problems and historical development of his institution, will furnish much of the material in method that may be helpful to the individual teacher, but beyond these suggestions which can be derived from a careful study of institutions and their growth, there is relatively little to be derived from any mere restatement of high-school methods. What the high-school teacher ought to have is that intangible something which we call the scientific spirit. He can secure that only from the thoro mastery of some experimental science. If, for example, by a course in chemistry the student has been trained to take any substance which comes into his hands and work out a careful analysis of its constituents and the mode of their combi-

nation, he has certainly acquired something which is more significant than the facts of chemical composition; he has acquired a method of attacking the problem which comes before him. In the same way, if his studies have been along biological rather than the chemical lines, if he has learned how to observe the characteristics of certain living forms and how to relate these characteristics to the environment in which the organisms have grown up and in which they live, he has acquired again a method and spirit of observation and study which will be of great assistance to him in his contact with pupils.

The demand which is expressed in this discussion of the scientific spirit is so broad and general in its scope that the single illustrations should not be taken to cover the whole demand which is being expressed. No student who pursues a course in chemistry or a course in biology or a course in any branch of science merely for the sake of the facts which we will derive from these courses has acquired the scientific attitude which will lead him to take up every problem which he confronts in a scientific way. The best kind of training for the scientific spirit which is being demanded in these statements is the kind of training which is required in most institutions for the advanced degree of doctor of philosophy. The essential requirement for this degree is that the candidate shall exhibit ability to carry on independent research. Our American institutions suffer in comparison with the German and French institutions below the university in the fact that the German and French institutions are manned by those who have shown themselves able to do scientific work of an independent sort sufficient to give them the doctor's degree. It is perhaps too early in our American educational development to demand that the teachers in our high schools be doctors of philosophy in every case, but every institution which is preparing teachers of high schools should make a special effort to introduce into the course of study some training of the sort which shall make its graduates independent in dealing with educational difficulties. Even if a man is going to teach Latin or literature or history, one phase of his problem in the high school will be to deal with individual minds. These he must diagnose on the spot; no set formal method can be given to him. He must be able to cope with new situations that arise in a period in the student's life when there is the largest degree of variation and the most capricious type of development. The training which a high-school teacher needs is closely comparable to that needed by a physician. No student of medicine is allowed to feel that he can learn formal methods of treating cases. He may become acquainted with the general forms of treatment that are utilized by those who are older in experience than himself (this would be comparable to the historical and institutional training which was advocated above), and then the main emphasis in the physician's education is laid upon the scientific studies which will render him independent as far as possible of any formal precepts and make him a student of every case with which he has to deal.

The fulfilment of this particular requirement does not call for any modification in the present course of study provided in American colleges, but it does

call for a very radical modification in the types of training that have been looked for in candidates for high-school positions. One very seldom hears any inquiry made of a teacher who is to give high-school courses in history other than those which relate to his preparation in history. The same is true of literature, of modern languages, and even of mathematics. There has been very little recognition of any special preparation for educational study of the children.

a) The demand which is here expressed has often been recognized in a somewhat narrower form. Teachers have been urged to study some scientific subject closely related to education, such as the theory of education or psychology. The unfortunate effect of short courses in these subjects has often been that teachers have required the false notion that they are supplied thru these courses with a scientific attitude toward education. Psychology and theory of education may be, and often are, quite as formal as other disciplines. It is only when these lines of study prepare the teacher for independent grasp of educational problems that they serve the end for which they are here advocated. It would be very much better for the prospective teacher to get a broad general scientific training by taking courses in biology or physics and then learn to apply his scientific habits to education thru psychology or the theory of education, than that he should get a vague body of psychological information and little of its scientific spirit.

The fact that high-school teachers are not generally trained in the methods of independent attack upon problems comes out very clearly when one contrasts American high-school teachers with teachers in the German *Gymnasium* or the French *lycée*. To be sure the ordinary high-school teacher is overloaded with hours and is distracted from original investigation by temptations to enter administrative positions, such as the principalship of a high school or the superintendency of some neighboring school system, and for these external reasons scholarly research in American high schools is relatively rare as compared with German and French schools. But when all of these external conditions have been taken into account, the fundamental difficulty lies in the fact that high-school teachers are not trained in the methods of investigating even problems that fall within their special lines of investigation. It is a little wonder in view of these facts that there should be so much formalism and lack of scientific investigation in their treatment of the practical school problems which can come to them.

b) It seems very doubtful whether this special form of training can be adequately provided by departments of education in colleges. It certainly could not be provided by any special institutions for the preparation of high-school teachers analogous to the normal schools of the training of elementary teachers. The best work of a department of education in this respect is probably to interest students in broad scientific study and to interest the scientific departments in the college in giving the right sort of scientific attitude to those who are preparing to teach in the high schools. Some special

discussions from a scientific point of view of the problems of the high school might very properly be the work of a department of education, but the candidate for a position in the high school should never be allowed to present, in full satisfaction of his science requirements, courses in the theory of education. Such theory of education is at the present time in too formative a condition to be a suitable basis for scientific training.

6. A brief summary of the foregoing argument, then, is as follows: First, the most essential requirement for the preparation of a high-school teacher is elaborate training in the subject to be taught. This should extend into the higher branches of the subject to be taught to a sufficient extent to make the student reasonably independent in his judgment of authorities upon that subject. Second, the teacher should be acquainted with the institutions of education in the midst of which the high school stands. He should have some knowledge of the development of secondary schools in other countries and in America. Third, he should have, whatever his specialty may be, a training in science for the purpose of preparing him to deal with the problems that arise in his contact with students. The source of this training should not be sought in those disciplines which deal most intimately with the facts of education, but in whatever scientific subjects are available as giving the most complete training in scientific method.

IX

GEORGE W. A. LUCKEY, PROFESSOR OF EDUCATION, UNIVERSITY OF
NEBRASKA

1. We are in the midst of a most fruitful period in educational history. Within the past thirty or thirty-five years the population of the United States has doubled, the school attendance trebled, the average length of the school term has increased from one of six to one of seven months, and the attendance in public high schools risen from thirty thousand in 1878 to over six hundred thousand in 1903. Taking the last ten years for which I have been able to obtain data—1893-4 to 1903-4—the enrolment in secondary education increased from four hundred eighty thousand to eight hundred twenty-two thousand, or an average increase of more than thirty-four thousand per year. During the same period the enrolment of students in colleges and universities in the United States changed from seventy-eight thousand to one hundred eighteen thousand. I have reason to believe that this great increase in higher education has been no less rapid during the past few years. In many schools the attendance has doubled and even trebled within the last ten years.

This evolution in education is shown not alone by the increase in attendance. Our conceptions of education are undergoing a remarkable change. The people are beginning to realize that secondary education is an essential part of the common-school system, the years of which increase in importance as you ascend the scale. Human life is larger than it used to be and vastly more important. As civilization grows in complexity, education must grow in

efficiency. Owing to the increase in education and the complexity of present-day problems, greater responsibility is being placed on the young. In the high schools of the future are to be planned and executed some of the most important battles of civilization. These schools must be kept in close touch with the life of the community. All problems that vitally affect society should find consideration here. To teach in such an institution one must know and appreciate life. His education must be dynamic, not static. He must have keen insight and be able to adjust himself to new conditions with the least possible friction. He must not only be thoroly alive to the needs of humanity, but he must know how to inspire others with its problems.

Not many years ago the chief purpose of higher education was to prepare for professional life. Only those who desired to enter the learned professions had need of such education. Today the problem has greatly changed and the multiplied industries as well as the learned professions are in need of men of brain and brawn. To meet these changed conditions of society the high-school curricula must be modified, the attendance increased, sex and class distinctions and advantages eliminated, and the teaching force vitalized. To do this the problems of education must become a part of every teacher's stock in trade.

Large sums of money are needed to carry forward the work of education and more will be needed in the future. But the people recognize the importance of giving and can be relied upon so long as they have faith in their schools. If the teacher is properly prepared for his work and equal to the emergency, he will give sufficient proof for the faith reposed in him. He will organize and give purpose to the thought, shape the ideals, and better the life of every boy and girl placed under his instruction. No one can succeed without an ideal or well-conceived aim, and it is the purpose of good teaching to create within the students ideals of life equal to their strength and worthy of their best endeavor. The aimless teacher can be of no service in inspiring others—precept is nothing, example is everything. He must have a high moral purpose, be thoroly alive, progressive, observant, and in sympathetic touch with the life of the community. It is no easy matter to prepare such a teacher, for more depends upon the how than the what.

The importance of this question can be seen in another way. In 1896 the University of Nebraska established what is known as the University teachers' certificate granted only to graduates who have met certain academic and professional requirements preparatory to teaching.¹ Since that time the certificate has been granted to four hundred fifty-one graduates. One year ago, one hundred fourteen students received the degree of Bachelor of Arts, sixty-seven of that number received the university teachers' certificate, and eighty-two of the number are now teaching. This year (1905-6) there were one hundred thirty-eight students who received the Bachelor of Arts' degree,

¹ These requirements are explained somewhat in detail in my work on *The Professional Training of Secondary Teachers in the United States*, The Macmillan Company, New York, pp. 186 ff.

sixty-eight of whom received the university teachers' certificate, and eighty-eight of the graduates have indicated their intention of entering the profession of teaching. For a number of years a majority of the graduates of the university have engaged in teaching and what is true of the University of Nebraska is no doubt equally true of other state universities if not of all higher institutions. It is especially important that the education of these students who are to exert such a telling influence on humanity should be planned with care. And since, in many instances at least, they represent the majority of the student body there should be established in every such institution ample provision for their training.

2. When we come to determine the particular training of the high-school teacher there is still some divergence of opinion, tho there is quite general agreement that the high-school teacher should have at least a college education. By this is meant that he should have completed at least the first sixteen years of public education, as usually outlined, four years of elementary, four years of high school, and four years of college. The Committee of Fifteen appointed by the National Educational Association to consider among other things "The training of teachers" said, in its report of 1895, that,

The degree of scholarship required for secondary teachers is by common consent fixed at a collegiate education. That no one—with rare exceptions—should be employed to teach in a high school who has not this fundamental preparation.

This seems to have been the prevailing view of the National Educational Association ever since, and it has come to represent the more often-expressed view of the different state associations. Quoting from my work on *The Professional Training of Secondary Teachers in the United States*, published by the Macmillan Company in 1902:

We have reached a point in our educational progress—at least in many states—wherein the minimum standard for the preparation of elementary teachers can be, and ought to be, the equivalent of a four-years' high-school course, and at least two years of additional training at some good state normal school. The minimum requirement for secondary teachers should be, in addition to the above high-school course, a four-years' college course, supplemented by the professional requirements as outlined in the preceding chapter; the latter to be insisted upon as earnestly as the normal-school training is in the former case.

Since writing the above I am even more convinced that these standards are attainable, practical, and desirable.

3. Scholarship alone is not sufficient no matter how thoro and extended it may have been. There must be in addition the teaching instinct, and a knowledge and appreciation of the educational processes and the laws of mental growth. Teaching and learning are disparate processes and are not acquired in the same way. The process of learning is one of acquisition and mental adjustment, while the process of teaching is one of guidance and the imparting of knowledge. The prevailing motive in the one case must be the desire to know or to understand, while in the other it must be how to impart, to assist others, to know what is already known. In the one case the

end in view is the object or the subject-matter, in the other the growing mind of the child. Hence to know education from the learner's standpoint is not to know it from the teacher's standpoint.

4. When we come to determine the nature and amount of professional training for the high-school teacher there is less unanimity of thought. There is quite general agreement that there should be at least twelve hours in the department of education, and I am but voicing the prevailing practice when I quote again from my work on the professional training of secondary teachers as follows:

The average amount of purely professional study required of the student for the university-teachers' certificates is usually from fifteen to eighteen hours—more often the latter. This may or may not include a course in psychology offered in the department of philosophy and a special-methods course offered by the department in which the student has his major (academic) subject. The professional work is more often spread over the last two years of the college course. By some it is thought preferable to have it deferred until the last year in college or taken as graduate work and made a matter of concentration and intensive study.

The time will come when this professional study will be required in addition to the Bachelor's degree, but I do not believe we are ready for that now. I think it is better to have the professional training spread over the last two years of the college course. Naturally the professional study of the teacher should follow rather than precede or be taken with his academic training. The reasons for this have been given elsewhere.¹ It is difficult for the student to approach a subject both in the attitude of the learner and the attitude of the teacher at one and the same time.

5. The various courses offered in departments of education which come under the category of professional knowledge may be grouped under the following heads: historical, theoretical, psychological, practical. Under historical may be included the history of education, school systems, educational classics, educational reformers; under theoretical may be included the theory, science, and philosophy of education; under psychological, genetic, and applied psychology, child-study, and adolescence; under practical, school organization, management and supervision, observation and practice teaching, methods of instruction, and the art of teaching. There is, of course, in this grouping considerable overlapping depending on the teacher and the nature of the instruction. The work of the student should be distributed over these four groups in order that the profession of teaching may appeal to him in its true significance.

6. From a study of the problem it is evident that the subjects which are thought to be of the most importance in the professional training of secondary teachers are as follows: history of education, with a probable course in educational systems—foreign and domestic; educational psychology, including child-study and adolescence; theory of education, including the science and

¹ See *The Professional Training of Secondary Teachers in the United States*, published by the Macmillan Company, New York, pp. 189 ff.

philosophy of education; school administration, including organization, supervision, and management, observation of actual schoolwork under direction and criticism, and practice teaching. The latter should be obtained when possible under conditions similar to those of actual practice and is essential in the training of a teacher, tho less vital in the training of a secondary than in the training of an elementary teacher. I desire to call attention to Part I of the *Fourth Yearbook* of the National Society for the Scientific Study of Education which is devoted to "the education and training of secondary teachers," edited by Professor Manfred J. Holmes, secretary of the National Society, Normal, Illinois. This is a valuable monograph and should be in the hands of everyone interested in the training of high-school teachers. It treats the more important topics concerned in the education of secondary teachers in an able and interesting manner.

7. It seems to me that the time has come when we should demand of the new high-school teacher not only a college degree but also a professional diploma which will indicate that he has made a serious study of the important problems upon which he is about to enter. This would in time prevent two-thirds of the present failures in high-school teaching and bar from high-school instructors much of the "cultured aimlessness" that is now in the shape of individuals drifting thru our colleges without a purpose or a thought of the meaning and seriousness of life. When fewer teachers enter the schoolroom without professional training the normal schools and college departments of education will receive less criticism for the failures they do not cause and have had no opportunity to prevent.

8. Two thoughts should be made specially prominent in the academic requirements of the high-school teacher. First, he should have a broad general education, hence a Bachelor of Arts' rather than a Bachelor of Science' degree, unless the latter is made to cover an equally broad culture foundation. Second, he should be a specialist in the subjects he expects to teach, not a specialist in the narrow sense of having his knowledge confined to a single subject, but a specialist in the broader sense of being strong in one line while familiar with and keenly appreciative of many others. In this academic training the University of Nebraska has long held that the student who is to receive the university teachers' certificate must show a much higher grade of scholarship (averaging above 80 per cent. on a scale of 100) and keener appreciation than he who is simply permitted to pass for a degree. On these points Dr. A. F. Nightingale, in the monograph above referred to, says:

I would make language, then, ancient, modern, foreign, native, the basic study for all who would become successful teachers. Upon these foundations laid deep and strong, I would build a superstructure, scientific in character, mathematical in correctness, historical in breadth; and upon this building poetical in its symmetry, beautiful in its proportions, richly plain and plainly perfect in all its inner furnishings, there should rise some magnificent turret, original in design and typical of a special genius, which should tell to all around its exact location and for what it is specifically adapted.

Given the above training in a suitable environment the student with apti-

tude for teaching will make an excellent teacher and all others should be directed into other channels where they are more likely to succeed or to do less harm in misdirecting others.

X

GEORGE H. MARTIN, SECRETARY OF MASSACHUSETTS STATE BOARD OF
EDUCATION

1. The absence of means for training teachers for public high schools is the most glaring anomaly in the American system of education. The reason for it is easier to find than the remedy. When the movement to provide for the training of teachers began in the first half of the last century there were but one or two public high schools. Boys learned their Latin and Greek and mathematics preparatory to college in endowed academies.

The reformers of the time had only the common or district schools in mind when they established normal schools. The objective point in all their arguments was the improvement of the "common" or "free" or "district" schools. The dedicatory addresses at the opening of the early normal schools were alike in declaring that an auspicious day had dawned for the common schools. Thus they became associated in the public mind with elementary education alone. There was a tacit assumption that special training was needed only for the comparatively illiterate young persons who aspired no higher than to be teachers in the common schools. Thus a stigma of educational plebeianism attached to the normal schools from the start, and professional training itself came to be regarded as a means of making up natural deficiencies or as a short cut to a low-grade career. To be sure, all the arguments used by the advocates of normal schools and all the analogies from the other professions which they presented applied as well to the teaching in academies and colleges; but this seems to have been wholly overlooked so intent was everyone upon reforming the common schools.

While the normal schools were developing their work, the public high schools were taking the place of the academies and drawing their teachers from the same sources, that is, from the colleges. The teachers in these schools shared with their college instructors their contempt for normal schools and, what was far more serious, contempt for professional training. Not many years ago a professor in Yale College was asked, "What importance do the members of the Yale faculty attach to the science of education?" "None, whatever!" was his prompt reply. And at about the same time the foremost college president asserted publicly that all the principles of education worth knowing could be learned by any intelligent man in twenty-four hours.

It is not surprising, therefore, to find teaching in the secondary schools which violates every axiom of sound pedagogy. Some twenty years ago in a report on the high schools of Massachusetts made to the board of education by one of its agents, the writer after giving some amusing specimens of class

teaching said, "My observation leads me to conclude that untrained teachers are much alike whether they have been graduated from a college or only from a district school."

I think no unprejudiced observer can escape the conclusion that the falling out from the high schools during the first two years is due more largely to the preponderance of these young college women than to any other single cause. In the higher grades of the grammar schools from which these students have come to the high schools, they have been under the influence of strong men and women most of whom have learned the science of teaching either in normal schools or in the school of experience or more often in both. Going from skilled to unskilled teachers, the students fail to adjust themselves to the new environment and then comes mutual misunderstanding. The friction is attributed to every cause but the right one—to weak and coddling methods in the grammar schools, to superficial teaching, to defects in the high-school course of study, to social interests, to the craving to be out in the world. Were these causes real, their existence would only emphasize the need of better teaching in the early high-school years.

2. Turning to inquire what these young collegians need to fit them to teach, no one who has seen any considerable number of them at work but knows that what they need most and right away is knowledge of elementary psychology and of the simplest principles of pedagogy. This is what all persons need who are preparing to teach, and in this respect there is no difference between teachers in elementary schools and teachers in high schools.

To acquire in the most simple and direct way knowledge of the mutual actions and reactions of the mind—any mind—and its environment, knowledge of the relations of the mind and body, knowledge of the way the mind acts in acquiring knowledge and shaping conduct under its own impulses and under natural conditions, and how its actions may be modified under the impulses of a teacher and under the artificial conditions of a school—to acquire this knowledge is the beginning of the special education of all teachers. College graduates, because of their longer training, should have greater power of concentrated and sustained thought and should be able to acquire this knowledge quicker than persons in the ordinary normal schools, but the essential thing is that it should not be clouded by metaphysics nor obscured by the complexities of scientific method.

With only so much knowledge as this, the young teacher beginning in a secondary school would be saved from many mistakes. What is more important for him he would know that to be a good scholar is not all that is required to become a good teacher—a bit of knowledge that not one secondary school-teacher in a hundred had ever heard of, or read of, or dreamed of when he began to teach.

3. Because the process of development becomes more complex with increasing years, because multiplied and varied experiences, subjective and objective, need to be organized and utilized, the secondary-school teacher

needs to have his attention concentrated for a time upon the especial psychology of the high-school age. He needs to know how the function of the teacher changes with changes in the pupil, so that he may waste no time in false starts. On the school side there is needed some elementary knowledge of the principles of school organization and of school and class management.

On this common foundation for all teaching may be built a structure of professional training as broad and generous as circumstances make possible—a structure to which all previous college work may be made to contribute.

4. While the elementary knowledge thus briefly outlined is essential to the teacher's success, to stop with it would be disastrous. Unless a teacher in any department gets a broader view of the scope of his work than can be obtained by looking at his pupils simply as pupils and studying them with relation to their place and work in his classroom, he has no element of the master-workman.

The most important lesson which his training can afford him is the distinction between education and schooling, between a man or a woman and a scholar. To come to discern the higher functions of the teacher and the course of study and the school in view of the larger life, is to reach a view-point necessary to the teacher equally for his own dignity and for his power to inspire his pupils. It is at this point that the secondary school should make its most distinct contribution to the public. Because the high-school age is peculiarly the age of ideals and of enthusiasms, peculiarly susceptible both to worldly and unworldly impressions, the views of life held by the teacher are of supreme importance, and the teacher's powers of insight and of influence need to reach the highest standard both in quality and in degree. It is an important part of the training of the secondary-school teacher to bring these facts vividly to his attention.

5. Another distinct line of work in the preparation of these teachers is study of the secondary curriculum. Assuming that these prospective teachers have acquired a working knowledge of the subjects which they will have to teach, they need to be taught how to fit them to the student.

They need to know the value of a subject for knowledge and for discipline and how to make it most effective for both. They need to know it as a whole and in its parts and to be able to distinguish between the essential and the nonessential, that is, they need to have a sense of proportion developed in judging the relation of different subjects and of the parts of one subject to each other.

They need to know how to use the different activities of the mind in mastering the subjects. And they should be taught how the same goal may be reached by different routes, but that there may be a choice of routes. All this may be summed up in one word, method.

6. The work thus far suggested is all elementary in its character. A part of it is identical and another part is parallel with that given in normal schools. Beyond this the work should develop on the philosophical and historical side.

Education as a function of society is a subject which should appeal to college graduates with great force. If they have become interested in sociological studies, this will prove one of the most fascinating; and, if they have not been drawn in this direction, it will serve as a most attractive introduction.

The chief advantage of this subject is that it is equally useful for cultural and for purely professional or vocational ends. As a part of the outfit of a man calling himself educated, it ranks by the side of the study of politics or religion or literature or science or the family.

It may be studied in accordance with the same scientific method as these other subjects, and it may have the same broadening effect. To a young person engaged in preparing himself by special study for a special calling, it is of the greatest value to learn how that calling is a part of a larger whole, to see that one who enters upon it is not narrowing himself but is in reality entering one of the great fields of human endeavor, that the problems at home are parts of larger problems to which in all time men have given their supreme efforts.

7. It is at once the misfortune and the shame of the profession of teaching that so few of its members have attempted to think beyond the petty problems of their own classrooms, having lost themselves in the maze of schemes and methods and devices. I once spent a whole day with a company of distinguished secondary-school teachers out for a pleasure excursion, who used all the time before dinner, at dinner, and after dinner in discussing, weighing, measuring, and anathematizing some recent changes in the Harvard entrance requirements. The study of which I am speaking is not the so-called history of education which forms a part of the curriculum of many normal schools and teachers' reading circles. That is too scrappy and disconnected to have any value either vocational or cultural. Nor is it the study of great teachers and educational reformers. That is instructive and inspiring to teachers in any grade of schools, but, in my judgment, would better form a part of the teacher's private reading than be introduced into a training-school curriculum.

8. The work in psychology, general and special, the work in secondary-school method, and the study of school organization and management cannot be successfully conducted without adequate opportunities for observation and practice. Psychology abstracted from child-life and dealt with only as a *subject* can never be made to enter in any vital or vitalizing way into the mind of the student preparing to teach. Only as his psychological concepts reflect his own experiences and the experiences of children and youth whom he is studying will they be of any value to him in shaping his own teaching.

The student's observation should include children of all ages and in all grades of school at work and at play. Especially should it include the work of good secondary-school teachers. It should be directed equally to pupils and teachers that the observer may learn how a good teacher brings pupil and subject together and uses the subject to develop mental power. The student should be directed to observe the reactions between the personality of the

teacher and the personality of the pupil, and how the skilful teacher adapts himself and his work to the different personalities in his class and to the varying moods of the same pupil. These are subtleties of the teaching art which can only be conceived as they are exhibited in the classroom.

Included in the training there should be some opportunity for each pupil to try himself in the conduct of a class in one or more of the subjects of the secondary curriculum. The proper conditions of such experimental practice are similar to those required for practice in elementary schools and need not be detailed here.

9. Were all people in agreement as to the necessity for some preparatory training for teachers in secondary schools, and did the lines of work which I have sketched appeal to all, there would still remain the questions, Where can the training be best given? Should it be in a normal school which is also training teachers for elementary schools, or in a separate normal school, or in a department of a university? Each has its advantages. Much of the work of the existing normal schools is adapted equally to teachers in all grades of schools. The elementary psychology and the observation of children which accompanies it is general in its application, and most of the principles of school management apply equally to all schools.

Besides this the student would be in an atmosphere sympathetic toward professional training. The presence of a body of college-trained students would also react favorably upon the other classes. One objection to connecting this work with a college or university, namely, lack of sympathy on the part of the college faculty and authorities, is gradually losing its weight. This is shown by the recent action of the Ohio legislature in establishing a Teachers College at the State University at Columbus, and the more significant action of Harvard in establishing education as a department co-ordinate with philosophy of which it has heretofore formed a part. When education in its theory and practice comes to be regarded as legitimate a subject of collegiate study as are other lines of human thought and social endeavor, a school for training teachers may without humiliation to its faculty and students be organically connected with any university. So placed, the school would have some advantage. The use of college libraries and laboratories, the association with scholars, the cultural traditions would be useful on the side of the scholarship of the prospective teacher, and so placed the school might win its way more directly to the interest and sympathy of secondary-school teachers in whose schools and classes the work of observation and practice would have to be carried on.

On the other hand, both the university connection and the special school are open to the objection that they tend to perpetuate the caste spirit which in many quarters is now so strong. That secondary-school teachers should assume that for any reason they are a class apart is most unfortunate. What the public schools need is some unifying influence which shall obliterate all distinctions based on such accidents as age and grade and curriculum, and

which shall unite all teachers in the study of common problems and in the advancement of common interests. Some such influences are already at work.

It is doubtful if it would be possible or wise to prescribe a universal rule as to the associations under which teachers should be trained. That will prove to be the best place where, under a faculty broad enough to have studied all the fields of educational effort, with opportunities for observation which include children and youth of all ages and for practice in secondary schools of acknowledged excellence, in an atmosphere sympathetic toward every form of training, the students will come to feel that they are members of no mean profession, and will grow to some adequate conception that the work demands and is worthy of and will repay the most earnest and strenuous endeavor.

XI¹

M. V. O'SHEA, PROFESSOR OF THE SCIENCE AND ART OF EDUCATION, UNIVERSITY OF WISCONSIN

I. *Requirement of professional interest and intention.*—In the improvement of the high-school teacher it is imperative that teaching in the secondary school be regarded as a serious profession, which cannot be entered on the spur of the moment by persons who are without other employment. In respect to its teaching force, the high school is now too much of a half-way station between the university and the bar, the hospital, the counting-room, and other interests. In this matter we can learn useful lessons from Germany, France, and other European countries. All our efforts at training secondary-school teachers must prove more or less ineffective until candidates come to us in some such a frame of mind and with such intentions as those usually have who are preparing for law or medicine or engineering or commerce. It is believed that if the requirements indicated in the following theses be met, the need expressed in this first one will be realized.

2. *Requirement of native fitness.*—Speaking generally, but slight attention is now given to personal characteristics in the selection of high-school teachers. Consequently they are very frequently defective in qualities of leadership. Most colleges and universities have no effective method of choosing those among their students who are by native endowment well equipped for teaching. Practically all who have secured a diploma, and completed the small amount of required study in the department of education, are certificated, regardless of their natural fitness for this special work.

It is imperative that the institutions that train high-school teachers should

¹ On a number of occasions the writer has expressed his views in considerable detail respecting various aspects of the training of the high-school teacher, and it seems appropriate at this time to treat the subject assigned him by presenting a series of theses without elaboration. If any reader should be interested in the arguments upon which these theses are based, he might glance over the following: "Teachers by the Grace of God" (*Journal of Pedagogy*, Vol. XIII, 1900); "Concerning High-School Teachers" (*The School Review*, Vol. X, 1902); "Psychology in the Training of Teachers" (*Elementary School Teacher*, November, 1904); "The Function of the University in the Training of Teachers" (*The School Review*, Vol. VIII, 1900); "Universities and Normal Schools in the Training of Secondary-School Teachers" (Part I, of *Fourth Yearbook of the Society for the Scientific Study of Education*).

adopt a plan whereby they may early discover candidates who do not meet the personal requirements, and dissuade them from striving to become teachers. The opinions of all who have had to deal with the student during his academic career should be secured, but the department of education should be specially responsible for the task indicated in this thesis. Altho the problem is a peculiarly difficult one, and cannot be solved completely under existing conditions in colleges and universities, still if the need be felt deeply more can be done than is now done in most places. But the universities must act in unison; no single institution can make great headway against the academic tradition that one can teach in a high school if only he has amassed a sufficient amount of formal knowledge in any subject.

3. *Requirement of scholarship.*—One cannot teach a subject unless he has thoroly mastered it. He must have a real, vital grasp of it, and not merely a formal or verbal knowledge of it. Teachers are often found giving instruction in subjects which they have acquired for purposes of securing a certificate and such instruction is always shallow, mechanical, ineffective. It amounts often to little more than memoriter drill on unintelligible technical terms.

Teachers in secondary schools should be certificated to teach not all subjects whatsoever, but only the subject in which they have shown special proficiency. To meet the necessities of teaching in small high schools, it will often be necessary for teachers to teach more than one subject; but in such case, the certificate should indicate the major subject (the candidate's specialty) and the minor subjects, not to exceed two in any case. The several departments of the university should be made solely responsible for determining which of their students have acquired such a genuine mastery of their respective subjects that they may be certificated to teach them.

A teacher's mastery of a subject must include an understanding of what aspects thereof are most appropriate for secondary-school students and what point of view in presenting the subject will prove most effective. To this end every teacher should be required to complete a teacher's course in the subject he is to teach, and this course should be conducted by one who is thoroly familiar alike with the subject, and with the nature and needs of secondary-school pupils. Mere advanced, technical courses should not be regarded as in any sense teachers' courses, as is now the case in some universities. The teacher's course should be regarded as graduate work, as indicated in the following thesis.

4. *Requirement of studies in education.*—The experience of nations has shown that in order to achieve the highest success teachers should understand the subject as well as the material of education, and should become possessed of what is known respecting methods of economy and efficiency in organizing and managing a class or a school or an educational system. Further, the teacher is a servant of society in a very vital sense, and he should be made conscious of his opportunities and duties in this respect. To meet these requirements, then, every teacher should complete courses treating of the principles

of human nature in general, and of the nature of secondary-school pupils in particular. He should also complete a course treating of the psychology of learning under the conditions of school education. These courses should confer upon him greater efficiency in adjusting his subject as a whole and in each part to the needs and capabilities of his pupils. Next, he should complete courses treating of the history and principles of education, so that he may realize what are the aims of educational work, viewed in the light of contemporary thought, and how these aims have been developed. These courses should make him conscious of the supreme ends to keep in view in his teaching, and what should be the relation of his subject to the other work of his pupils and of the school as a whole. Finally, the teacher should complete a course treating of his proper relations to the extra-school interests in the community in which he teaches.

These professional studies may best be pursued as graduate work. The training of the secondary-school teacher will be seriously defective so long as he completes both his academic and his professional studies during his undergraduate course. The courses in education described above should occupy two-thirds of a graduate year. If the candidate spends no time in graduate study, as is the case generally at present, then these professional studies should occupy an equivalent of one-half of his senior year.

5. *Requirement of observation and practice.*—It is universally recognized that effective instruction in medicine, law, engineering, agriculture, and the like requires opportunities for concrete demonstration, and for practice to a limited extent at least. Teaching is no exception in this regard. It is, however, a fact that education, concerned as it is with the exposition of principles for effective instruction, is more seriously handicapped than any other subject in observing the principles it expounds. There is need in the first place of an educational museum, wherein may be displayed specimens of all useful educational appliances, illustrative materials, textbooks, etc. It is imperative, in the second place, that there be in every institution training high-school teachers a fully organized and well-equipped school typifying the school system in which students will teach. This school should be constantly utilized to give definiteness, concreteness, and vitality to instruction in every phase of educational theory and practice. So far as feasible it should be utilized also for the testing of educational theories at present in dispute. Finally, it should be utilized for the purpose of initiating the novice in the practice of his art. It will not ordinarily be possible or desirable to perfect him in technique, but his special needs can be discovered, and he can be put in the way of curing his faults by his own efforts while he is actually in service.

The schools of observation and practice should be regarded as laboratories for the work in education, and in no sense as schools preparatory to the university. They should be under the control of the department of education, which should be responsible for curricula and methods of teaching and discipline. So far as possible the department of education should secure the

active co-operation of all departments of the university having in charge subjects taught in an elementary way in the schools in question. The teachers' courses in the university should be presented with constant reference to the work done in these schools.

5a. Wherever it is at all feasible, the university should enter into relations with the high schools in its vicinity so that candidates may have some practice under ordinary public-school conditions. The university should contribute to the salaries of a certain number of teachers in these high schools, to the end that unusually competent persons may be secured, who may serve the university as critics of practice teachers. These critics should be appointed by the university, upon the recommendation of the department of education, and subject to the approval of the board of education in charge of the high school. Practical work of the character indicated should occupy at least one-third of the time which the candidate devotes to professional studies, and it should be regarded as absolutely essential to the efficient training of high-school teachers.

XII (*special*)

REQUIREMENTS AND STANDARDS

FREDERICK E. BOLTON, PROFESSOR OF EDUCATION, STATE UNIVERSITY
OF IOWA

- I. Requirements for High-School Certification.
- II. The University and the College as Training-Schools for High-School Teachers.
- III. Standards in Germany.
- IV. Standards Suggested for American Schools.

In beginning to prepare this paper an attempt was made to secure thru a questionnaire statistics showing the specific kind of training and experience which the high-school teachers have actually had in a number of typical states. The inadequate returns received made any exhaustive statistical study impossible. In only a few states has any attempt been made to gather such data. Some state superintendents replied in such a way as to indicate their probable feeling that such information would be entirely superfluous. But not until the statistics can be arrayed so as to show the glaring lack of uniformity and how many teachers are below even moderate standards can we expect to improve conditions. School boards and legislatures must be convinced thru unequivocal testimony that woeful deficiencies exist often where the public boasts the most. About buildings and grounds the popular mind may have some intelligent opinions, but the ordinary school public does not discriminate between the expert teacher and the time-server. In the minds of the people, so long as friction is avoided, any teacher is considered a good teacher.

Failing to secure the adequate data concerning the actual preparation of teachers in service, I have investigated the laws of all the states to find the

legal provisions concerning high-school teaching. We should bear in mind that the actual preparation made by many, even a majority, is much better than that demanded by statutes. Local demands in the better cities are naturally in advance of legislation. Statutory provisions can seldom be secured until the wisdom of the requirements has been rather generally demonstrated. There is very little constructive legislation, especially school legislation. Legislative bodies in old-settled states are very conservative and merely reflect what they believe to be public opinion by confirming thru statutory provisions what is well established in practice. Since they are usually so ignorant concerning educational needs it is seldom possible to convince them of desirable legislation until long after various localities have proceeded way beyond the measures enacted. In new states where traditions do not fetter and public opinion is little crystallized much more constructive legislation is secured than in the older states.

As was believed, most of the states were found to be without legislation differentiating the high-school teacher from any other. In many school codes the term high school does not appear. This branch of the public school system is a product of evolution which has come largely without legislative enactment. Localities developed at first simply "upper rooms," "higher departments," etc., and then bestowed the name high school without waiting permission or measurement by state authority.

Thus, singularly enough, in most states, altho state certificates and diplomas are awarded to those who seek them, yet nobody is required to have them. Legally, the one possessing the lowest grade of county or town certificate may teach in the highest grade of school. Many cities have secured state authority to regulate the certification of their own teachers and usually have differentiated the certificates for the various grades of work. There is a crying need now for all states to make the differentiation. There is also great desirability of securing uniform laws in all the states so as to secure inter-state comity in matters of certification.

A few pioneer states have secured desirable legislation relating to the certification of the various grades of teachers and it might be parenthetically observed that these states are already forging ahead in educational matters in a variety of ways.

I. REQUIREMENTS FOR HIGH-SCHOOL CERTIFICATION

In the following paragraphs mention is made mainly of those states which have specific legislation determining the qualifications of high-school teachers. In general, where the laws simply state that all teachers must possess a legal license and do not distinguish between elementary and secondary no mention is made of the states. A few others are mentioned because it was possible to secure definite statistics concerning the teachers in service.

In Arizona only those holding the diploma of the Territorial Board of Education or the Board of Education of the Normal Schools of the territory

are eligible to teach in the high schools. Diplomas and state certificates from the other states may be recognized by the Territorial Board.

Colorado demands that all who teach in the high schools of that state shall take a county examination covering all the branches taught in the high school.

In the District of Columbia all high-school teachers must have a special certificate which qualifies the holder for that grade of work only.

In Connecticut there are 4,316 teachers in the state of whom about 1,400 are normal-school graduates and about 400 graduates of colleges and universities. Most of these 400 are teaching in high schools. Inasmuch as there are only 66 high schools in the state it is probably true that most of the teachers in the high schools are college or university graduates.

California has set the highest pace in the United States with reference to the qualifications for high-school teachers. Under statutory provisions the State Board of Education grants all certificates for teaching in the high schools of the state. These may be obtained by examination or otherwise but "no credentials shall be prescribed or allowed unless the same, in the judgment of said board, are the equivalent of a diploma of graduation from the University of California and are satisfactory evidence that the holder thereof has taken an amount of pedagogy equivalent to the minimum amount of pedagogy prescribed by the State Board of Education of this state, and include a recommendation for a high-school certificate from the faculty of the institution in which the pedagogical work shall have been taken." California accepts the diplomas from all the universities belonging to the Association of American Universities, and also from fifteen other selected colleges and universities thruout the United States, provided the graduates have taken courses in the theory of education, or have had actual practice in teaching under supervision of the pedagogical faculty, equivalent to twelve hours per week for one-half year. Graduates of all the accepted colleges not belonging to the Association of American Universities must have completed subsequent to graduation one-half year of advanced academic or professional (pedagogical) work, in residence, either at the same institution or at some other accepted institution, or in lieu of such graduate study, have taught with decided success, as regular teacher or as principal, at least twenty months in any reputable school, elementary or secondary. After July, 1906, at least one-third of the prescribed pedagogy shall consist of actual teaching in a well-equipped training-school of secondary grade, directed by the department of education. After July 1, 1908, practice teaching in a school of the grammar grade in connection with the California state normal schools will be accepted as an equivalent.

In Florida, high schools cannot be recognized as such unless the teachers employed to give instruction therein are competent to teach the subjects required by the official course of study, and no school will be granted state aid unless such teachers are provided. While it is not now deemed practicable to require all such teachers to hold state certificates, it is recommended that preference always be given by boards to the holders of such certificates.

In Iowa, the most democratic and individualistic state in the Union, there is utter lack of uniformity. All depends upon local autonomy. The term high school does not appear in any legislative enactment, there is no definition of the term except that which each community chooses to give to it, and the state superintendent's office has no authority to regulate its courses or prescribe qualifications for the teachers employed. Any one possessing a third grade county certificate may legally teach in any high school in the state. Notwithstanding this chaotic condition of educational legislation the state has many high schools which are unexcelled anywhere. The wealth of the state, the life in small cities possessing large rural population within a radius of a few miles of each, the uniformity of nationality, the lack of slums and factory districts give natural advantages which would easily give it with proper legislation the greatest school system of the United States. The state is suffering because of its prejudices against any form of centralization of power.

There are in the state about 650 graded schools which call themselves high schools. Nearly all of these might become high schools if the proper teaching force were employed, proper equipment secured, and a little effort made to enlist the interest of the rural population in the immediate vicinity. This has been demonstrated in many small villages where they have become awake to the possibilities. As it is, not more than 250, judged by proper standards, have any right to be called high schools. There are 185 schools on the accredited list of the State University. In these there are 879 teachers, including the principals and superintendents. Of these 453 are university or college graduates, 189 have had from one to three years in some college, 84 are normal-school graduates only. The remainder have had very little academic or professional training. Regrettable as it is, one in fourteen or one teacher in every third accredited school has had no institutional training beyond that afforded by the high school, and that usually in the home school. Of the total number employed 332 had been teaching ten years or more, 265 had five or more years' experience, while 61 were beginners. Statistics from all the schools which have any claim to the title of high school would show a much smaller number of college graduates and many more raw recruits.

Louisiana definitely recognizes high schools and makes an attempt to secure the best quality of teachers for these schools. In 1892 a law was passed imposing a penalty on all local school boards who failed to give preference to state normal-school graduates and graduates of colleges when employing teachers.

In Maine, according to the laws of 1904, the highest grade of state certificate is necessary to teach in any free high schools of the state. Candidates who are college graduates or graduates from the college preparatory course or its equivalent in a first-class academy or high school, and whose average rank is 90 and whose rank in any subject is not less than 70 will receive a certificate of the highest grade. Others who are not graduates but whose rank is excep-

tionally high, who can teach high-school subjects, including at least one ancient and one modern language, and who have taught successfully in high school, may receive a certificate of highest grade.

Massachusetts has 262 high schools requiring 1,820 teachers. Altho the laws do not specify any particular grade of certificate the sentiment of the people has secured a high grade of teachers. Of the teachers in the high schools 1,410 are college graduates. It is safe to assume that the remaining 410 are at least normal-school graduates. Only 98 have taught for less than one year.

Minnesota requires that any teacher employed in a state high school must hold a first-grade professional state certificate, issued either on a collegiate diploma or upon examination. However, the state superintendent may issue a permit, valid for one year, to high-school teachers who have not had the necessary teaching experience in Minnesota to entitle them to a first-grade professional certificate but who are otherwise qualified. A first-grade state professional certificate may be obtained by graduates from the University of Minnesota or from another university or college of equal rank. The applicant must first have secured a state first-grade certificate and must also have taught with success not less than nine months in a public school in a state. Applicants who are not graduates must have the teaching experience and the first-grade certificate noted above, and, in addition, will be required to pass a successful examination in the following branches: astronomy, bookkeeping, botany, chemistry, English literature, general history, geology, history of education, logic, moral philosophy, political economy, psychology, rhetoric, school economy, school law, solid geometry, trigonometry, zoölogy. A state professional certificate of the first-grade is valid to teach in any public school of the state, including high schools. It is made valid for periods ranging from one year to life, according to the merit of the holder. A certificate of graduation from the department of pedagogy at the State University entitles the holder to teach in any public school in the state for a period of two years immediately following graduation. At the end of such period the certificate may be indorsed by the president of the State University and the state superintendent of public instruction, when it becomes a life certificate. It is of interest to note that graduates of Minnesota state normal schools or other normal schools of equal rank outside of the state, are not entitled to teach in the high schools. They receive first temporary and then life certificates which are valid in any public school in the state below the high school department. The state teachers' first-grade certificate, valid for five years to teach in any public school in the state, will not qualify the holder to teach in the high school or even for the principalship of a state graded school. These rigid regulations have raised the quality of the teaching force and the salaries of teachers in Minnesota very materially.

According to figures furnished by State High-School Inspector Aiton, there are 192 high schools in the state employing 870 teachers, including the super-

intendents. Of these 733 are graduates of a college or a university and only 56 are graduates of a normal school. It is well known that very generous state aid is provided, whereby each standard high school receives \$1,500 from the state treasury. This state aid affords better salaries and attracts better teachers. The state aid and the high standard of scholarship demanded have put Minnesota in the very front rank educationally.

In Montana it is provided that no person shall be employed as a teacher in a high school or as the principal teacher in a school of more than two departments who is not the holder of a professional county certificate or the holder of a life state diploma issued by the State Board of Education of Montana, or who is not a graduate of some reputable university, college, or normal school.

New Jersey provides that all teachers in the high schools must possess either a first-grade county certificate, a first-grade city certificate, or a state certificate. The first-grade certificate requires an examination in the theory and practice of teaching, New Jersey school law, the history of education, and general history, in addition to the usual branches required for a second-grade certificate. The lowest grade of state certificate involves an examination equivalent to that required for the first-grade county certificate and, in addition thereto, psychology, plane and solid geometry, literature, botany, and free-hand drawing, or in place of one or more of these subjects such other subjects as the State Board of Examiners may require. This lowest or third-grade state certificate is valid for seven years.

In Nevada no one may teach in a high school who does not possess either the county high-school certificate, which is good for four years, or a state certificate granted from the Nevada State Normal School or by a reputable university or college from which the bachelor of arts degree has been received. Pedagogy is also required in the course. The state life diploma also is a valid license to teach in any public high school.

New York will not allow teachers to hold positions in the high schools unless possessed of some specified grade of certificate. At the present time they accept for high-school teaching what are known as the training-school certificate, the state certificate, the state special certificate, the normal diploma, the college graduate certificate, and the college-graduate professional certificate. College graduates are given a provisional certificate valid for two years. If they pass an examination upon psychology, history of education, principles of education, methods of teaching, during those two years they may be awarded a permanent certificate. Those college graduates who have completed a course in pedagogy outlined by the state receive a certificate valid for three years, at the end of which the same may be indorsed by the state commissioner of education and made a life certificate. In New York 39 per cent. of the high-school teachers and 43 per cent. of the principals are college graduates.

Nebraska has taken a most important step toward providing competent teachers for the high schools of that state. On and after September 1, 1907

no person shall be granted a certificate to teach in the high-school department of any high-school district or in the high-school department of any city school district in the state who is not a graduate from a regular four-year course of a college or university, or a graduate from the advanced course of a college, university, or normal school in the state authorized by law to grant teachers' certificates, or who does not hold a professional state certificate obtained from the state superintendent on examination. During the interim between now and August, 1907, high-school principals and city superintendents may obtain a first-grade county certificate, valid for three years, which will make them eligible to teach in any high-school district or city school district until September 1, 1910.

Ohio, which long lagged behind in the matter of educational legislation, has probably outdone all other states in several respects. One of these is in accurately defining high schools and colleges. Then, to be consistent, the qualifications of high-school teachers have also been thoroly defined. All teachers in the high schools must possess some form of a high-school certificate. This certificate may be issued either by the county or the state. All county high-school certificates must include the usual branches required for a third-grade certificate, and, in addition, literature, general history, algebra, physics, physiology, and four branches from the following list: Latin, German, rhetoric, civil government, geometry, physical geography, botany, and chemistry. In addition, the certificate must show that the candidate "possesses an adequate knowledge of the theory and practice of teaching." Special high-school certificates are issued, valid only for the branches mentioned in the certificate, but it is further provided that no person be employed as a special teacher of music, drawing, painting, penmanship, gymnastics, German, French, the commercial industrial branches, in any elementary or high school who has not a certificate of good moral character and a certificate of proficiency in the theory and practice of teaching. Cities which have the power to grant certificates must observe similar conditions. The state certificates are, of course, of a still higher grade.

Texas allows cities of five hundred or more school population to establish their own boards of examiners which issue different classes of certificates corresponding to the grade of work to be taught. The high-school certificate is a prerequisite to teaching in the high school and is valid for high-school work only. State certificates are recognized by these boards. Diplomas from the State University which certify to the requisite amount of pedagogical work are valid as state certificates.

In Washington, D. C., certificates are limited to special grades of schools. The certificates are issued by the city. Only a special certificate will be accepted for high-school work. Graduation from the Washington normal schools and other approved normal schools is recognized toward certification.

In Wisconsin all teachers must have some form of state certificate to be qualified to teach in the high schools of the state. The state certificates are of

two grades—the limited five-year certificate, and the life certificate. These certificates may be gained by examination or thru countersignature of state normal-school diplomas, college diplomas, or university diplomas. A diploma granted upon the completion of a collegiate course in the State University of Wisconsin or from the full course of any Wisconsin normal school is valid as a temporary certificate for one year and after countersignature by the state superintendent is validated as a life state certificate. Diplomas granted by other colleges and normal schools, within and without the state, whose course of study are equivalent to those recognized in Wisconsin may be recognized in the same way as those issued in the state. Life state certificates issued by other states may be countersigned by the state superintendent of Wisconsin upon the recommendation of the State Board of Examiners, and thereby become life certificates in the state. The diploma granted upon the completion of the elementary course of the state normal schools qualifies the holder only for positions as assistants in four-year high schools or as principals of three-year high schools. All principals and all teachers of four-year high school courses must possess an equivalent of the life state certificate. Assistants may secure a special state certificate by first securing a county certificate in the county where they desire to teach and in addition passing a state examination upon all branches which they teach and which are not included in the county certificate. Superintendents must all possess the unlimited state certificate. It will be thus seen that the entrance to teaching in the high schools of Wisconsin is very carefully guarded. The rigid provisions have raised the qualifications for teaching in Wisconsin very materially.

The following figures show the qualifications of teachers in the Wisconsin high schools for 1903 and 1904:¹

Attended the Wisconsin State University	94	
Attended other colleges	45	
	<hr/>	139
Attended a normal school	71	
Hold life certificates	3	
	<hr/>	74
Total		213

Table showing number of teachers including principals in the four-year free high schools with highest school attended:

Attended the Wisconsin State University	229
Attended universities and colleges outside the state	85
Attended Beloit College	30
Attended Lawrence University	40
Attended Ripon College	13
Attended Milton College	3
Attended Wisconsin normal schools	268
Hold licenses and certificates of approval or state certificates on examination	131
	<hr/>
Total	799

¹ Eleventh Biennial Report of the Department of Public Instruction, 1904, p 85.

Concerning qualifications of principals of three-year high schools in the year 1903-4:

Attended a normal school and hold normal-school diplomas	23
Attended a normal school and hold elementary certificates	3
Hold life certificates	5
Holds a limited state certificate	1
Holds a university diploma	1

Total	33
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Professional requirements for high-school certificates.—Statistics concerning the actual amount of professional training of teachers are even more difficult to secure than those concerning academic qualifications. In those states where no differentiation is made between the licenses required of elementary teachers and high-school teachers there is little incentive to gain high-class certificates. In Iowa the third-grade certificate is the only legal requirement and a comparatively small number apply for state certificates. The main incentive to secure the state certificate is the fact that the state certificate is valid in any county of the state. Now that the county certificate will be valid in any county in the state the number of state certificates will doubtless be still further decreased. It is also desirable in many states when teachers move and find the state certificate necessary in the new state.

County certificates in all states include some test on the theory and art of teaching, or didactics, as it is frequently called. But most county examinations in the theory of education are a perfect farce. The questions seldom require any technical knowledge of pedagogy. Anyone with an ounce of common sense could answer them correctly. Most frequently when books are prescribed in the reading circle or by the superintendent as a basis for the examination some general book like *Jean Mitchell's School* or *The Evolution of Dodd's* is selected. While these are good enough in their way and would afford a few hours pleasant reading and stimulate the better emotions, yet they give no real principles upon which to base a theory of education. Even in the state examinations the primer of the subject has scarcely been touched. In a few states definite syllabi are prepared giving an outline of the subjects, particular books to be read, etc. This plan gives the candidate a definite plan of work and sometimes happily convinces them that the surest and soundest method of preparing is to go to some good institution where they can receive proper training.

Without exception all states include some professional work in the examinations for life certificates. A few (New York, for example), grant provisional or temporary state certificates to college graduates, even tho they have not included professional work in their course. Thus all who secure the life state certificates have gained some insight into pedagogical subjects. The subjects prescribed vary greatly, tho the history of education and psychology are usually included. As indicated above, the amount required is very meager. Qualitatively it is usually antiquated.

In most states which validate college diplomas as state certificates a year's daily work in psychology and education or a year in the latter, following a year

in the former, is required. Even in those states the professional work required when the certificate is gained by examination is very meager. It is in no way the equivalent of the work done in the year or more in college. Any college graduate could prepare for the professional examination ordinarily given thru two weeks' continuous careful reading of some elementary texts. This is entirely wrong and very inconsistent. The examinations in other subjects like botany, physics, and mathematics are put upon a technical basis and generally the questions are modern in nature. But the professional examinations are decidedly irritating to modern teachers of those subjects. Even an imperfect knowledge of a primer of the history of education, psychology, and of method would enable the candidate to pass.

New York state has taken an advanced stand on the matter of professional training and prescribes the following work for the state certificate: in addition to graduation from college, general and educational psychology, ninety recitation hours; history and principles of education, ninety hours; methods in teaching, sixty hours; observation, twenty hours. This would make a total of about seven hours a week for a year, or fourteen semester units. As previously mentioned, graduates may receive a provisional certificate for two years if they have not had the professional work, but before it can be made a permanent certificate they must pass an examination upon the professional work indicated. Those who secure state certificates by examination are required to pass a rigid examination in the professional subjects. This examination is made thoro if we are to judge from the syllabus issued by the state department. The syllabus contains a good outline of all the subjects and a fine list of references. It is thoroly technical and academic in character, and it sets a high pace for all other states. Several universities in New York, and doubtless several colleges, have arranged their work in the department of education to correspond with the state requirements. I have at hand outlines of the work as prescribed at Cornell, Syracuse, and at Columbia.

All who receive the Teachers College diploma at Columbia must have completed three semester units of psychology, three units of educational psychology, three units in the history and principles of education, and three units in the theory and practice of teaching some special subject. Those who receive a degree from the College of Education in Chicago are required to include for graduation eight majors in education, including the history of education, principles of education, educational psychology, and a course in general psychology.

The University of Wisconsin, whose diplomas are recognized as state certificates, provided prerequisite professional work has been included, requires ten semester units—three units in psychology, three units in either the history or principles of education or advanced educational psychology, and four units which may be elected from either the department of philosophy or the department of education.

The state of Texas recognizes the diploma from the University of Texas,

provided the prerequisite professional training has been included. The university prescribes as the professional work two semester units of school management, four units in the methods and principles of teaching, four units in the psychology of education, two units in the psychology of development, and six elective hours in the department of education.

California not only accredits the work of the university toward the state certificate, but will not grant a certificate to teachers in the high schools unless the candidate is a graduate of the university of California or an approved equivalent institution. In addition to the work required for the bachelor's degree the candidate must have completed at least one year of graduate study in the University of California, or an approved university. This year of graduate study shall include one-half year of advanced academic study, part of the time at least being devoted to one or more of the subjects taught in the high school, and the remainder of the time must be spent in a well-equipped training school of secondary grade, directed by the department of education of the approved university. This represents the high-water mark of requirements, both academic and professional, for teaching in the high schools in the United States. The professional work required by the department of education in the University of California includes three semester hours of the history of education, three hours in a study of secondary education, two hours of methods, and four hours in practice teaching. The department urges the study of philosophy and psychology as prerequisites, but does not require them.

The Teachers College of the University of Missouri, whose diplomas are recognized as life state certificates, requires candidates to complete three semester hours of experimental psychology, and twenty-four hours of education. The work in education must include three hours in the history of education, the theory of teaching three hours, and from three to nine hours of practice teaching. In addition to the psychology and education requirements, each candidate must complete at least eighteen semester hours in each subject in which the special certificate is sought. This gives almost ideal requirements for the state certificate to teach in high schools.

II. THE UNIVERSITY AND THE COLLEGE AS TRAINING-SCHOOLS FOR HIGH-SCHOOL TEACHERS

Ever since secondary schools were first founded the university and the college have been training-schools which have furnished the majority of their teachers. The German secondary schools have always been manned by the best products of the German universities and that tells the story of Germany's enviable position in secondary education. Since the time of the founding of the "great public schools" in England. Oxford and Cambridge have furnished all the teachers for them. Tho they have not had the professional training of Germany's matchless schoolmasters, yet they have been men of fine culture and broad training. In America Harvard and Yale in New England and William

and Mary in the South at once began to place their graduates in the "grammar schools," like the Boston Public Latin School, and later in the academies. The influence of these men representing the best culture of the times has had a marked effect. In the secondary school where inspiration and outlook are so essential to the life of the school the breadth of view which comes from college life is indispensable. It is lamentably true that these zealous young men and more recently women have often been woefully lacking in pedagogical insight, but their scholarship and vital touch with life have been more valuable than the mere drillmaster's arts.

With the advent of the normal school in 1839 an attempt was made to correct the deficiency in the pedagogical training of teachers. Naturally the pendulum swung a long way in the other direction and methods and devices became a fetish. The normal schools went to seed on methods. Devices and details were eagerly pursued when principles should have been sought. The drillmaster became the ideal class teacher and the machine method-master the ideal superintendent. Normal-school graduates everywhere in the eighties and nineties began to teach in the high schools and to occupy the superintendencies. When I was graduated from a Wisconsin normal school in 1890 graduates did not think of looking for a grade position, unless they happened to live in a large city. High-school positions and good principalships and superintendencies were readily secured by the men. Similar conditions obtained in all adjoining states. At the present time conditions are so changed that it is only in exceptional cases that the graduate of a normal school begins in a high school. Occasionally they begin in a small high school which does two or three years of high-school work. But usually the normal graduate commences in the grades or goes to some university to complete work for graduation. This makes quite an ideal course of training, for at the normal schools they become imbued with the teaching spirit and their university work gives them a scholastic baptism. Happily a new era has dawned in normal schools with reference to methods. They have been touched by the new spirit in psychology and child-study and are now, in general, seeking principles instead of devices.

The normal school, generally speaking, is not fitted to train high-school teachers. There are, of course, some schools which are much better equipped than others. There are some large and aspiring ones which are lengthening their courses, providing laboratory and library facilities to such an extent that they are better able to accomplish this work than the one-horse colleges, but the organization of a normal school must ever be such as to limit its function to the training of elementary teachers. Just as soon as it transcends this function it ceases to be in the highest degree effective in training elementary teachers, for which they have all been designed. It then becomes an additional state college or university, a duplication which most states do not desire.

The high-school teacher needs, above all, a broad outlook upon life, deep and thoro scholarship, and liberality of attitude which is best promoted by the

university atmosphere. The normal school, with its ten-weeks' courses and ceaseless flitting about, its many exercises per day, the constant emphasis upon method rather than content, the excessive attention to the little details such as are largely necessary in training the immature and those who are to deal with details of elementary work, all militate against sound scholarship and liberality of mind. Most normal schools are so organized that students are admitted from the country school. These students are in constant contact with the most advanced. This necessitates leveling down to the plane of the most immature.

The only place where the science of education can be adequately taught is in the university or in the few colleges. The institution must be equipped with a department devoted solely to education. No man straddling the chairs of philosophy, psychology, logic, ethics, and education can even have come to an independent educational philosophy, much less develop it in others. One burdened with several chairs and all the subjects within each may have students recite from textbooks but it is lame teaching. The work in education cannot even be done well where one man is required to cover all subjects within the department.

President G. Stanley Hall says:

I think preparation of secondary teachers should never be permitted in a normal school where primary teachers are trained, but should be entirely given over to the university. This is essentially the case in Germany. . . . I think there is very little in common either in methods or matter in the curriculum proper for these classes of teachers.¹

Professor DeGarmo says:

The most obvious distinction between the normal school and the university as a training ground for secondary teachers is that the normal school is obliged by its conditions, its primary aims, and its traditions, to devote its chief energies to the preparation of elementary teachers. Only in a large and general way can it devote more than a fraction of its attention to the training of teachers for secondary schools.²

These differences he regards as so fundamentally opposed in nature that any attempt to unite the two will result in the decreased efficiency of the normal school.

President Van Liew, who speaks on the question after much experience as a normal-school man and who is a scholar of distinction, says:

The weakness of the normal schools, especially in the matter of training secondary teachers, lies in its inability to supply large general culture. So far as secondary teachers are concerned, at least, it ought not to try it.³

Charles B. Gilbert wrote:

The ideal place for the training of secondary teachers is a teachers' college of some sort attached to a university as a co-ordinate part, utilizing all the scholarly advantages of the university and adding the special training needed to make teachers.⁴

President Thompson of Ohio State University, in discussing the great need of developing teachers' colleges in connection with the universities, said:

¹ *Fourth Yearbook*, I, p. 84.

² *Ibid.*, p. 89.

³ *Ibid.*, p. 92.

⁴ *Ibid.*, p. 102.

I think it goes without discussion that for the cause of education the teachers in our high schools should have the university spirit and that they ought to have college training. This argument is based not so much upon the particular subject studied as upon the superior value of association with university faculties and university methods. Our high schools have suffered for lack of such teachers on the one hand, and on the other hand they have suffered from having too many teachers whose normal-school training or other education has not been with a view to training them for high-school work. It would seem, therefore, that in some form the teachers' college ought to be a part of the university organization.¹

In the same meeting President Babcock of Arizona, who has also had long experience with the Minnesota and California systems, said:

If the normal schools are going to train their students for grade-work frankly, honestly, without any pretensions or conceit, those who desire to go on for high-school work must go to the university, to the colleges or teachers' colleges, which provide that sort of training.²

My own belief in the necessity of university training for high-school teaching was definitely developed before I became a member of a university faculty. Immediately upon graduation from one of the best normal schools in the country I became a high-school principal. I soon came to the belief, and many times expressed it, that normal-training was insufficient preparation for such work. At the earliest possible moment I supplemented my training by a university course before re-entering the public-school service. Later I was for two years a member of the faculty in the same normal school. I believe my colleagues there will bear witness that I continually urged that our graduates ought to complete a university course before beginning high-school work. That the function of the university and the normal school must be different, I believed then as firmly as I do now.³

The experience of the New York State Normal College ought to be valuable in determining the suitability of the normal school or the college in preparing high-school teachers. The Normal College was granted a charter in 1890 empowering it to confer degrees in pedagogy, hoping thereby to attract college and university graduates who would spend at least a year in post-graduate study along strictly professional lines. Those expectations have not been realized. During one year forty such students were in residence, but the number has declined because pedagogical courses in the meantime have been developed in colleges and universities.

It was thought, too, at the time when the Normal College was chartered that the graduates from the classical courses offered at the Normal College would find positions in the high schools, but the demand for teachers of more liberal culture has increased so much since 1899, that probably not more than one-half of the graduates have found employment in the secondary schools of the state. Consequently, the Normal College has not been able to meet the expectations or the demands of the state for college-bred teachers who have a proper knowledge of the science of education and the principles of pedagogy. . . . The belief of educators, philosophers, and educated people alike has crystallized into the conviction that teachers who are to be employed in the high school, normal schools, for teachers' training-classes, for teachers, and as instructors in manual

¹ *Trans. and Proc. Nat. Assoc. of State Universities*, 1904, p. 43.

² *Ibid.*, p. 64.

³ My views of that time may be seen in an article in *Education*, May and June, 1898.

training, domestic science, art, and other special subjects should be college graduates with a thoro knowledge of the general principles of pedagogy and the most advanced and most valuable methods of teaching their specialties.¹

The report points out that the normal schools are not equipped for preparing teachers for the high schools. In consequence all of the elementary work at the State Normal School has been abolished, the requirements for admission made equal to those maintained in eastern colleges, and a four-years' course of study in the liberal arts and in pedagogics has been established.

Tho there are many splendid teachers in our best high schools and a few in the smaller schools, yet the fact remains that our boys and girls in the most critical period of their lives are in control of immature, inexperienced youngsters. Some of these youths have large native ability, and special potential teaching qualities, and ultimately become good teachers. Some have good academic training also and after expensive experimenting upon the children become first-class teachers. Their enthusiasm, vigor, cheerfulness, and general culture are all qualities that we ought to retain, but the fact remains that our optimism regarding secondary-school teaching must come from viewing the select few rather than from conditions as a whole.

The greatest defect in our American schools is the lack of uniformity of requirements for teaching. Under our ultra-democratic notions some properly fitted teachers enter the work, but they are obliged to come into competition with a majority who are unprepared. Frequently because of ignorance on the part of boards and often because of nepotism the incompetent cheap teachers drive the worthier ones out of the market or force them down to the lower level of salaries. The inadequate compensation is the great deterrent which keeps thousands of the most promising from ever entering into the undesirable competition.

We are greatly in need of legislation in all states which will permit only the absolutely well-trained to enter the ranks. The cry frequently raised against such legislation that the schools would be without teachers is sheer nonsense. When our colleges and universities can find such abundant supplies of doctors of philosophy for every subordinate instructorship there need be no difficulty in securing all the adequately prepared teachers necessary, if living salaries are offered. Legislation eliminating the unfit would raise the salaries. In all those states having laws requiring teachers to possess high-grade certificates the salaries are demonstrably above the average paid in those states without such protective legislation.

Although the statutory provisions are very insufficient in requiring adequate preparation for teaching in the high schools, yet many cities have made regulations which require all to be college graduates. In Ft. Dodge, Iowa, for example, all are required to be college graduates and to have had two years' experience. There are hundreds of cities large and small where either

¹ *An. Rep. Ed. Dept.*, p. 274.

definite legislation to this effect has been enacted or else the practice has become local common law.

The North Central Association of Colleges and Secondary Schools has had a very marked effect in raising standards of teaching in the high schools. No school can become accredited unless all the teachers are college graduates or the equivalent. One high-school inspector wrote me :

We have about fifty high schools on the north central list and many more are trying for admission. This requirement has been most wholesome in its effect on our schools, and has done more than any other one provision in our recent educational history. Of course there has been a gradual increase in the number of college graduates occupying high-school positions, but it has simply been the law of evolution, a sort of triumph of the fittest. The normal school . . . has in the past filled a good many positions, and many of the school authorities have been unable to distinguish between them and graduates of other institutions. The influence of the North Central Association, the increased efficiency of our denominational colleges and the gradual increase of salaries have all contrived to drive them (the normal-school graduates) out of the field of the best schools except in a few isolated cases.

III. STANDARDS IN GERMANY

The training required of the German secondary-school teacher is much more ideal than that demanded of teachers in the same kind of schoolwork in the United States. In Germany advanced, critical, academic, and professional scholarship are absolute prerequisites to teaching in the secondary schools. No deviations are allowed. No mere pull with the board will suffice, for the matter does not rest with the local board, but with the state authorities.

In Germany all secondary-school teachers are university trained, as they ought to be everywhere. The candidates for a position in the secondary schools must have had at least three years of university study before being admitted to the examination for the state certificate, which all must possess. This means a high grade of academic scholarship since university entrance is conditioned upon graduation from the secondary schools, which is fully equivalent to the completion of the sophomore year in our very best colleges. Therefore every teacher in the German secondary schools has done work equivalent to that required for our masters' degree. As a matter of fact, the majority of German secondary-school teachers have studied more than three years in a university. The majority are possessors of the doctorate degree which cannot be secured with less than three years of university work and usually requires four or five. Each teacher is required to present a major line of work and a minor. The examination in the minor must reveal complete comprehension and mastery of the subject far beyond any limits to which it is taught in the secondary school. Even with this preparation they are not permitted to give instruction in that branch in the advanced classes of the school. In the major subject not only thorough mastery is required but there must be evidence of critical and exhaustive research to the extent of becoming not only a master but an authority. A thesis in the major must reveal independence of method, acquaintance with the history and literature of the subject. The thesis and

the examination are intended to test the candidates' knowledge of its philosophic aspects. In a general way we may say that the academic training of the German secondary-school teacher is quite on a par with the attainments of instructors in our best colleges, and the majority are comparable with well-seasoned professors. Promotions are so slow there that the majority are about thirty years of age before securing permanent positions.

Knowledge of subject-matter, however, is happily deemed insufficient for any German teacher. All teachers in the secondary schools are required to include psychology, philosophy, and theoretical pedagogy in the state examination. In addition, they must take a two-years' course of professional training. This can be begun only after passing the state examination.

IV. STANDARDS SUGGESTED FOR AMERICAN SCHOOLS

1. As minimum requirements it seems fair to ask that all teachers who enter high-school work should have had at least the equivalent of a college education. To accept less is to place the schools in charge of immature, unscholarly boys and girls and undeserving place-hunters. The high schools are the people's colleges and should ever remain centers of liberal culture. That they can never be when in charge of teachers who have never learned to love scholarship. I am of the firm belief that only in exceptional instances should teachers be permitted to teach in our high schools who have not actually studied in a standard higher institution. Those who preferred to acquire certificates thru examination only should be required to pass most searching examinations. What if an occasional deserving individual were thus debarred? In most states the right to practice medicine is withheld from all except those who have studied in a reputable medical college. No mere private study and cramming for the examinations will suffice. The right to enter the examination, as in Germany, is conditioned by previous study for a term of years in a reputable institution. The theory is—and perfectly sound—that no one can gain adequate knowledge of modern methods of medicine without coming directly in contact with properly equipped laboratories and skilled teachers. Thru private study of books the diligent might accomplish much, but the risks to society are too great to admit of trifling. Hence the necessity of measures which will protect society. Many states have similar protective legislation in the profession of law.

Are the needs not as great in teaching? The results of mistakes are not always so immediately apparent to the public in education as in medicine, but to the specialist in education they cannot be hidden. Why intrust the most precious possessions of the human race to the ruthless hands of ignorant beginners and confirmed quacks and charlatans? Every poor teacher helps to spoil scores of children every year, while the quack doctor of medicine occasionally harms an individual. The malpractice of the inexperienced teacher is tenfold more harmful to society than that of the quack doctor. The teacher guilty of malpractice dwarfs, and distorts, poisons the mind and body of the

budding, developing child, while the quack doctor merely fails to cure bodily disease. The quack teacher sows the seeds of disease, the quack doctor simply fails to cure.

2. From the professional side the minimum requirements should be at least one full year of daily work in education subsequent to a half-year of work in psychology. It would be still better, and not excessive, to demand that one-sixth of the college course should be given to educational and philosophical subjects. This should be so distributed as to give about one-half year daily to general psychology, a full year daily to the principles of education and child-study, and the remainder of the time to the history of education, methods, school systems, etc. If one-fourth of the 120 units of the college course could be professional, the following arrangement would be desirable: psychology, 6 semester hours; principles of education, 6; child-study, 2; methods, 4; history of education, 4; secondary education, 4; observation and practice, 4.

The Germans are wise in requiring actual residential study in a university as a prerequisite to teaching in the secondary schools. (Normal-school study is required of all who teach in the elementary schools.) It is practically impossible for one to gain modern ideas of scholarship without institutional training. Even if possible, other methods are too uncertain and expensive. Private study may give one certain book facts but nothing can be substituted for the laboratory methods of the modern institution. The teacher who is to teach classes by modern laboratory methods must first have been thru the laboratory work himself. The teacher who is to teach literary and historical subjects must know what libraries contain and how to utilize them. This can only be secured thru contact with them. It is preposterous to think that men may be intrusted to equip laboratories and libraries when they know nothing of them. Yet such things are permitted and encouraged by our inadequate protective legislation.

The Honorable J. Sterling Morton eloquently emphasized the importance of professional training for teachers when he said:

We demand for Nebraska educated educators. We demand professionally trained teachers, men and women of irreproachable character and well-tested abilities. We demand from our legislature laws raising the standard of the profession and exalting the office of the teacher. As the doctor of medicine or the practitioner of law is only admitted within the pale of his calling upon the production of his parchment or certificate, so the applicant for the position of instructor in our primary and other schools should be required by law to first produce his diploma, his authority to teach, from the normal schools.

We call no uneducated quack or charlatan to perform surgery upon the bodies of our children lest they may be deformed, crippled, or maimed physically all their lives. Let us take equal care that we intrust the development of the mental faculties to skilled instructors of magnanimous character, that the mentalities of our children may not be mutilated, deformed and crippled to halt and limp through all the centuries of their never-ending lives. The deformed body will die, and be forever put out of sight under the ground, but a mind made monstrous by bad teaching dies not, but stalks forever among the ages, an immortal mockery of the divine image.

XIII (*special*).THE PROFESSIONAL PREPARATION OF SECONDARY
TEACHERS IN THE FIFTEEN SOUTHERN STATES¹

EDWARD FRANKLIN BUCHNER, PROFESSOR OF PHILOSOPHY AND EDUCATION,
UNIVERSITY OF ALABAMA

This report attempts to sketch the conditions relating to the preparation of secondary teachers prevailing in the southern states of the United States. It is based upon information gathered by a circular letter of inquiry distributed in April, 1906. School officials, including state superintendents of education, presidents of state universities, principals of (state) normal schools, and superintendents of public schools in the larger and more representative cities stated such requirements as were in actual force and described such customs as were practiced in the matter of the preparation of teachers for high schools. The states of Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, Missouri, North Carolina, South Carolina, Tennessee, Texas, Virginia, and West Virginia, and the city of Washington, D. C., were about equally represented among the replies sent in. Extensive information, furnished by the United States Commissioner of Education, based upon returns to his office two and more years ago, has also been used in the preparation of this report.

The interest in this inquiry concerning the requirements and customs pertaining to the preparation of secondary teachers centered around the four points mentioned in the letters of inquiry.

1. What scholastic preparation and what pedagogical training are *required* of high-school teachers in your state or city?
2. What courses of *academic* instruction, *especially* for high-school teachers, are given in your institution?
3. What courses of *pedagogical* instruction for high-school teachers are given in your institution?
4. Can high-school teachers in your state, city, or institution get *actual practice previous* to regular employment?

These four questions can well serve us as guides in telling the story of the preparation of high-school teachers in the South as practiced today. The exact statements in the replies are used as far as possible in the hope of making the report more historic than it would be if it presented only a general summary of present tendencies.

THE REQUIREMENT OF SCHOLARSHIP AND TRAINING

ALABAMA: In this, as in most other southern states, the high school is a non-legal institution. It is not named in the educational laws of the state. The first-grade teacher's certificate specifies by law, among other subjects, three high-school subjects: algebra,

¹ Legislative enactments relative to high schools made in some states during the interval between the preparation and the publication of this report render some of its statements purely historical. The immediate design of the work of the committee would be seriously modified if the attempt were made to incorporate these laws into this survey of existing conditions.

geometry, and physics. But any teacher holding the lowest (third) grade certificate may legally teach in any high school in the state. Such specific requirements as exist are determined by the city systems acting under their own educational charters. While Birmingham reserves the right to examine all applicants for high-school positions, it also has a general rule which requires applicants to be college graduates. In Mobile the teacher must be a graduate of a college or university "of good standing," or pass an examination on algebra, geometry, trigonometry, Latin, general history, Alabama history, English and American literature, rhetoric, physics, physiology, and pedagogy. In Montgomery the teacher to be eligible for appointment must hold a high-school certificate, which requires an examination in algebra, arithmetic, geometry, higher English, Latin, physiology, and theory and practice of teaching.

ARKANSAS: There is no legal specification as to what examinations secondary teachers shall be required to stand, either academic or pedagogic. The custom relative to these requirements may be exhibited by the practice of three cities. Hot Springs requires the teacher to "be a Bachelor of Arts or a Master of Arts from our best colleges or universities with successful teaching experience;" Little Rock mentions "college education—successful experience or normal-school training;" while in Pine Bluff the teacher "must be a graduate of a standard high school, normal school, college, or university, possess a knowledge of at least three standard works on pedagogy, and experience during one session as substitute worker."

FLORIDA: The law specifies requirements of *principals* of high schools in terms of the first-grade certificate. This is issued to teachers of some experience (at least two years) who pass examinations in geometry, trigonometry, botany, zoölogy, physics, rhetoric, literature, general history, Caesar and Vergil (two books each), and psychology. Only one city reports attempts on its part to get college graduates as its high-school teachers.

GEORGIA: There is no legal requirement beyond the customary certificate necessary for teachers in state-aided schools. Augusta requires that the teachers "should be graduates of a reputable college and a specialist in the department." Columbus requires "specialized university training for departmental work;" while Macon simply specifies a "diploma from a first-class college or university."

KENTUCKY: Kentucky has made no legal provision for, and neither supports nor controls high schools. The requirements in practice vary with the cities employing teachers. "Some accept state certificates, state diplomas, or degrees from colleges. Others hold special examinations." "An A.B. degree and three years' experience or a nine-months' course of pedagogical training is required. The degree must be from an accredited college, or recognized by the Regents' Board of Examiners of New York" (Covington). In recent years "a college degree is required of all high-school teachers in Louisville not in the manual department. No definite pedagogical training is required. Heads of departments must have had previous successful experience. Untrained assistants are frequently employed." Paducah requires only the "equivalent of a four-years' university course."

LOUISIANA: "There is no provision in the school law regarding the qualifications of high-school teachers as distinguished from other teachers; but high-school teachers are usually either college graduates, graduates of the state normal school, or holders of the first-grade teachers' certificates. The examination for this certificate covers a high-school course of study with some pedagogical subjects added." Another report on the prevailing custom says, "usually a normal-school graduate, often a college graduate is chosen." "They are required to be college graduates, or the equivalent, and to pursue professional study during the summer" (Baton Rouge). "Applicants for positions in our high schools are required to pass an academic examination, and to have had three years' teaching experience or a certificate from a normal training-school" (New Orleans). The high-school faculty of Shreveport is composed "of college and university graduates with years of practical experience."

MARYLAND: "Most of our high-school teachers are college graduates; the equivalent is pretty generally demanded. Not much pedagogical training is expected—rarely any." Baltimore states its requirements thus: "Fitness for appointment to teach in the high schools shall be determined by careful scrutiny of such diplomas or certificates of graduation as may be issued by colleges of good repute, or by an examination, oral or written, disclosing equivalent qualifications in the subject or subjects which the candidate proposes to teach. Proof of success in the actual work of teaching as well as the possession of the requisite knowledge will be considered."

MISSISSIPPI: Beyond the usual certificates, the state has no regulations. Columbus requires "a first-grade teacher's license on the state-required studies, and at least one year's experience." "Greenville requires that high-school teachers must have at least four years' training in a university or approved college."

MISSOURI: This is the only southern state in which the development of the high school has reached such a stage as to be made interesting by the acute opposition between the state department of education and the highest educational agency in the state for the training of teachers. The state on its part regards the public high school "as thoroly a part of the public-school system," but it makes "no specific provision by law for the training of high-school teachers." It "is unalterably opposed to creating an institution for the special purpose of preparing high-school teachers." High-school teachers must hold a first-grade county certificate, a state certificate, or a normal-school certificate—but this is not specified by law so as to distinguish them from elementary teachers.

"From now on high-school teachers who have charge of departments must be college graduates. No requirement has yet been formulated in regard to their pedagogical training. Practically we employ no one without experience" (Carthage). In Hannibal "a college, university, or normal-school training" is required. St. Joseph mentions a preparation of a "grade of a reputable college, with specialization on line taught," while St. Louis seeks "usually a suitable university degree and evidences of successful experience."

NORTH CAROLINA: Beyond the certificate issued by the county superintendent upon examination, no special preparation is required by law. Asheville has instituted "the high-school class" of teachers, which shall comprise "graduates of an approved university or normal college, with three or more years of successful experience in a city graded system of known efficiency," and teachers who "have taught seven years in the Asheville schools or its equivalent in a good city school system elsewhere and present evidences of systematic work and study under the direction of some person or institution of accredited worth." "All our high-school teachers are graduates of reputable colleges. We do not require pedagogical training, but encourage it in our selection of teachers" (Durham). Raleigh has no rule in this matter to guide in the selection of teachers; but "all are elected because of some particular qualifications for the work to be done."

SOUTH CAROLINA has been working on a legislative bill for the organization and aid of high schools. The provisions for the preparation of teachers proposed therein hardly belong to this report of present conditions. Columbia represents the situation thus: "No regular standard has been established, but we always get the very best teachers we can secure for the salary paid." Another city laconically notes the single fact that "greater care is exercised in selecting high-school teachers" than the teachers for lower grades.

TENNESSEE: The law regulating the certification of teachers in this state implies a recognition of the high school. Its certificates are classed as "secondary" and "primary." There are three kinds of the former: first-grade secondary (on diploma), first-grade secondary (on examination), and second-grade secondary (on examination). Graduation from the state Peabody Normal College meets the requirements for the first kind of certificate. Beyond this implication, the requirements for high-school teachers are left wholly in the hands of the local school boards. The usual custom in the cities, as described by one, "is to secure as far as possible graduates from the University of Tennessee or Peabody

Normal College." In the language of another the custom is that the teachers shall be "graduates of some reputable college."

TEXAS: The requirement is merely "the possession of a city or state teacher's certificate of a first grade or a permanent grade, sometimes of a college diploma." "There is no law in this state which specially prescribes the scholastic preparation or the pedagogical training of high-school teachers. Every city and town is a law unto itself in this matter."

"There is an unwritten law not to employ any teacher in the Austin high school who is not a college or university graduate." Dallas seeks "to secure thoroly educated, well-trained teachers of successful experience." Fort Worth "as far as possible gets graduates of colleges—these being better than the normal-school graduates." Without any requirement being in force, "most of the teachers of the Houston high school are graduates of the State University of Texas or of some institution of equal standing." San Antonio selects its teachers "from an eligible list who pass the high-school examination." Waco "rarely elects a high-school teacher who does not hold a diploma of a recognized college or university; some experience in teaching (in lower grades or in a high school elsewhere) is required."

VIRGINIA: The following legal requirement obtains: "Persons desiring to teach in the public high schools of Virginia shall be examined on such public high-school branches as they may be required to teach; provided, that graduates of colleges and universities of approved standing and reputation, shall be permitted, without further examination, to teach in such schools the branches in which they have been graduated." Pedagogical training other than theory and practice ("usually as found in some one single text on pedagogy") is not required.

Danville makes no requirements. Even in the absence of a rule, all teachers in Lynchburg are college graduates. Norfolk requires them to be "graduates of a satisfactory university or college on the subjects they are to teach."

WEST VIRGINIA. In the absence of a state law, the custom in the best high schools of requiring the Bachelor of Arts degree in a high-grade school has become "nearly universal." Among the others, normal-school graduates are chiefly in demand. The training requirement is badly overlooked by all of them. Usually experience has been had in the lower grades. A majority of the teachers in Charleston, Fairmont, Huntington, and Parkersburg are college graduates. "The recent practice in Wheeling has been to appoint only college graduates with experience in teaching."

WASHINGTON, D. C., specifies two requirements: "(1) College degree and passing an examination for high-school teachership; (2) Normal graduates with five years' experience as a teacher in a high school, except possibly as to graduates of local normal schools."

ACADEMIC INSTRUCTION PROVIDED ESPECIALLY FOR SECONDARY TEACHERS

The information gathered by the second question is very meager. There are but few institutions (probably three) in the South which attempt to prepare high-school teachers by devising courses of study particularly adapted to such preparation or by indicating something of the work which ought to be taken as a part of such preparation. Partly to indicate the existing attitude toward this factor, and partly to record existing conditions in the academic training of secondary teachers, detailed mention will be made of this information, even at the risk of greater monotony of record than in the preceding section of this report.

ALABAMA presents no academic instruction *especially* designed for high-school teachers. The usual high-school subjects are taught in high schools, normal schools, and some of the colleges, but not with a view to the preparation of the teachers of them in high schools. The standard conception seems to be that going over these subjects in the progress of one's

pursuit of the secondary curriculum is sufficient preparation for giving instruction in the same subjects. This remark applies to almost all other southern states with equal force.

ARKANSAS yielded no information, and even showed some misunderstanding of the point involved. One city reports: "Latin, modern languages. Our high school is the regular accredited high or secondary school." Another conducts "reviews once each month on English, mathematics, science, history."

FLORIDA: The University of Florida, lately reorganized, has under way an A.B. course in pedagogy. The academic work will, at the end of the sophomore year, qualify for the state certificate which requires examination in geometry, trigonometry, botany, zoölogy, physics, literature, general history, Caesar and Vergil (two books each), and psychology.

GEORGIA: Beyond the usual courses of study in all the higher grades of institutions, which are open to and taken by those who may become, and who may now be, high-school teachers, no courses of study are offered for such preparation. In one institution regular college *elective* courses are significantly regarded as especially designed for high-school teachers.

KENTUCKY: The State College offers two courses designed to prepare teachers for high-school work. One is a college course (four years) and leads to the degree of Bachelor of Pedagogy. "The entrance requirements to the freshman class are on a par with those of other colleges in the South." The other is the state-diploma course, and covers the work of the high school and about the first year in college. There is much psychology and theoretical pedagogy in each course. The completion of either course entitles the person to a life-certificate to teach in Kentucky.

LOUISIANA: Although a high-school course of study has been graded, outlined, and adopted by the State Department of Education, no institution has devised instruction especially designed for the academic preparation of secondary teachers. The new department of philosophy and education in the Louisiana State University introduces academic subjects of collegiate grade in its four-years' course leading to the Bachelor of Arts degree, but they are only the courses given to all other academic students.

MARYLAND: "The state normal schools offer no courses. Several colleges are state aided, and supply many secondary teachers; but they offer no course especially designed for secondary teachers."

MISSOURI: The State Department is opposed to such instruction. But the University of Missouri has notably developed a Teachers College originally intended to prepare high-school teachers. Recently it has added instruction designed to prepare elementary teachers as well. For the preparation of high-school teachers it provides (in addition to courses available in the department of liberal arts, the usual undergraduate courses) the following academic courses: agronomy (3 hrs.), manual training for high-school teachers (6 hrs.), advanced algebra (3 hrs.), trigonometry, and analytical geometry (3 hrs.), physiography of North America and Europe (3 hrs.), meteorology (3 hrs.), physical geography (3 hrs.), botany (two courses 6 hrs.), elocution (3 hrs.), English (two courses 6 hrs.), German (3 hrs.), Latin (Cicero and Vergil 3 hrs.), Greek (Anabasis 3 hrs.), Greek literature in English translation (3 hrs.), history of Greece (3 hrs.), history of Rome (3 hrs.), the evolution of cultivated plants (3 hrs.), general physics (3 hrs.), and experimental physics (3 hrs.). This plan of work is not committed to, but tends to prepare for, departmental teaching in the high school.

Cape Girardeau Normal School claims to be "a teachers' college and offers a full college course in the languages, mathematics, history, English, and the sciences, in addition to its professional courses." But none of this is specified as designed for the secondary teacher. Warrensburg State Normal School: "We grant our diploma to graduates of A.B. courses or of first-class four-year high schools without much requirement along academic lines."

NORTH CAROLINA, SOUTH CAROLINA, and TENNESSEE offer nothing beyond the courses provided for all students in universities, colleges, and normal schools.

TEXAS: The University of Texas has a school of education, but not a teachers' college

The idea that the future teacher in a high school needs special preparation prevails here to a certain extent, but not in a completely differentiated form. This is evidenced by the policy, waived in exceptional cases, of recommending persons for high-school positions in the state of Texas only when they have completed specified academic courses, and also by the practice of urging students preparing to be secondary teachers to take certain courses while receiving their academic training. Thus, before a person is recommended as a secondary teacher of Latin he must have taken in Latin three full college courses; in German, four and two-thirds full courses or their equivalent; in English, four full courses; in mathematics, three full courses; while in chemistry the student is urged to take nine full and partial courses.

VIRGINIA offers no courses especially for high-school teachers.

WEST VIRGINIA University "offers sixteen courses for high-school teachers and others" in its department of education.

PEDAGOGICAL INSTRUCTION PROVIDED FOR SECONDARY TEACHERS

ALABAMA: The University of Alabama provides junior and senior years' courses on genetic psychology, principles of education (presupposing psychology, logic, and ethics), and history of education, in which the problems of secondary education receive considerable attention, but the courses are not specifically designed for high-school teachers in preparation for their work. In common with like institutions in Georgia, North Carolina, Tennessee, and Virginia, it has a faculty member, maintained by the General Education Board, who devotes his efforts to establishing in the state a policy of public high schools. Some of the instruction given in these state universities mentioned below results from this movement of the General Education Board. The normal schools give the usual courses on psychology or psychology in education, history of education, theory and practice of teaching, school management and methods, but not for high-school teachers as such. Probably most of this instruction, as elsewhere, pertains to the lower grades of school work, when not treating of "education in general." The larger cities sometimes have means for pedagogical work on the part of high-school teachers *already in the service*. This usually consists of "monthly meetings of teachers where some author on pedagogical subjects or school management is studied." The superintendent or principal selects the works which are thus read and discussed.

ARKANSAS: Pine Bluff has bimonthly meetings of teachers for regular courses in psychological reading and instruction.

FLORIDA: At the University of Florida, students in pedagogy devote from one-fifth to one-fourth of their time on psychology, methods, school economy, and history of education.

GEORGIA: The University of Georgia provides courses for junior- and senior-year students on history of, science of, and principles of education and school management, including the general subject of secondary education. The latter considers "especially the relation of the high school to the common schools, the colleges, and the community at large, its course of study, organization, and methods in America and the leading European countries."

KENTUCKY: Nothing is offered in the state beyond "the usual professional" courses.

LOUISIANA State University by its new department of philosophy and education attempts, among other things, "to aid in increasing the scope and development of high schools, to qualify teachers for the higher grades of work in high schools and junior colleges, and to prepare teachers as supervisors, principals, and parish superintendents." The pedagogical courses are so arranged and balanced with required and elective academic courses as to occupy from one to four years, and lead to the Bachelor of Arts degree. In addition to the usual courses on education and cognate subjects, it has one course on methods (one year) "especially in secondary subjects" which also treats of the "aim, scope, and function of the high school."

MARYLAND: "None offered in the state."

MISSISSIPPI: A decade or more ago the University of Mississippi actively began a policy of fostering high schools in the state and extending their courses of study with a view to meeting college-entrance requirements. It has done little, however, on the pedagogical lines of interest in this inquiry.

MISSOURI: The Teachers College of the State University offers the most extended facilities along professional lines for high-school teachers to be found in the southern states. In addition to several courses designed for elementary teachers, the following are given especially for high-school teachers: educational psychology (half year, presupposing half year of experimental psychology), principles of education (half yr.), secondary education (half yr.), practice teaching for high-school teachers (1 yr.), the teaching of German (2 hrs., half yr.), teaching of Latin and Greek (half yr.), teaching of Greek and Roman history (1 hr., half yr.), the teaching of mathematics (2 hrs., half yr.), the teaching of physics (2 hrs., half yr.), the teaching of geography (2 hrs., half yr.) in part for high-school teachers, and the following which are open to such teachers but are not described as designed for any specific grade of teachers: teachers' conference on botany (2 hrs., half yr.), the teaching of English (2 hrs., half yr.), teachers' course on elocution (1 hr., half yr.), and the teaching of art.

Washington University offers five courses on pedagogy, but not specifically for secondary teachers. The City of Carthage requires "two promotional examinations," or one examination and one term in a summer school approved by the superintendent.

NORTH CAROLINA offers nothing.

SOUTH CAROLINA: The University of South Carolina offered a new course last year on the "Pedagogics of the high school, a two-hour half-year course, elective to junior and senior students, which comprised the work of seven co-instructors, treating of secondary education, and of English, Latin, history, mathematics, geography, and nature-study in the high school.

TENNESSEE: The University of Tennessee offers besides the usual pedagogical courses "a course in secondary education, including the psychology and pedagogy of adolescence, the history of secondary education, the comparative study of secondary schools in America and the principal culture nations of Europe, and some specific high-school problems in this section."

TEXAS: The University of Texas, in addition to the usual courses in general method, psychology, child-study, school management, history of education, and philosophy of education, designed to aid secondary teachers, principals, and superintendents of schools, offers the following "professional" courses: secondary education (3 hrs., one-third year), botanical method (3 hrs., one-third yr.), the teaching of elementary mathematics (3 hrs., one-third yr., partly for high-school teachers), the teaching of Latin (3 hrs., two-thirds yr.), and the teaching of manual training.

VIRGINIA: The University of Virginia offers a one-year's (3 hrs.) course in each of the following: secondary education, philosophy and psychology of education, principles of education, history of education, and school administration. These are not primarily designed for high-school teachers.

WEST VIRGINIA University offers nothing beyond what was mentioned in the second section of this report.

PRACTICE TEACHING IN THE HIGH SCHOOL PREVIOUS TO EMPLOYMENT

The existing condition is best described by the prevalence of the custom which either neglects this element in the preparation of the high-school teacher, or, if recognized and insisted upon, is relegated to some other institution or to some distant high school, if not frequently to training and experience in lower grades of schoolwork. This is probably the factor most foreign in the training

of secondary teachers. Even many training or normal schools recognize the fact that many of their students have had "experience" in school teaching before taking up their courses of study, and, consequently, lighten or lessen the amount of work done in practice teaching.

ALABAMA: The Troy Normal College Practice School does "some high-school work" in its last grade, and to this extent its graduates have practice before employment. Birmingham requires heads of departments to have had experience in teaching before appointment. In Mobile some teachers are promoted from the grades to the high school without having had high-school practice; some high-school teachers have had experience in high-school work *elsewhere*.

ARKANSAS: Cities in this state commonly have a "cadet class, the members of which practice in the schools as substitute workers."

GEORGIA: "Chiefly in common schools during course." Augusta depends "on other colleges for the training of our teachers." Macon requires "practice work two hours a day in our school. After they complete a normal course, we use them a year (probation) as supernumerary teachers, and afterwards employ in our public schools as regular teachers those whose work is satisfactory."

KENTUCKY: State College: "Some limited practice is given to students in regular courses, but it does not constitute any part of the required course." Louisville: No. "We usually employ some one who has had previous experience in some other school system." They found that employing college graduates (in the Girls' High School) without previous practice did not give good results.

LOUISIANA: "Not as yet," as one writer puts it.

MARYLAND: Only the practice "designed to prepare elementary teachers," as one return very frankly puts it.

MISSISSIPPI: The custom is not based on as good practices as in other states, this state not having any normal schools, even.

MISSOURI: Most Missouri high-school teachers are college graduates "who have thru summer schools and the regular terms of our state normals or Teachers College, received pedagogical training." "Missouri is unalterably opposed to creating an institution for the special purpose of preparing high-school teachers. Our best high-school teachers are not those who have been specially prepared for that work. They are our best educated people who grow into the ability to manage high schools thru having managed lower grade school work thoroly" (State Department of Education.).

In the high school connected with Teachers College of the State University, provision is made for definite practice teaching in high-school work in the training of the teachers. "Before certificates to teach in high schools are given, candidates must *prove* their ability to do work in those subjects for which they wish certificates. Three to nine hours' credit is required. This is done under the immediate supervision of the professor of theory and practice of teaching, assisted by others of the Teachers College faculty. . . . The school is, in a sense, experimental, as inexperienced teachers are called upon to test theories and methods suggested to them."

Cape Girardeau State Normal School plans the introduction of high-school practice in its training of teachers a year hence. Outside these schools, the general plan in this state for securing practice in high-school teaching is by serving as "apprentice teachers in the schools of a large city."

NORTH CAROLINA: The plan begun last year at Durham is this: "We take a few prospective teachers and give them practice work in our high school. Such applicants must be college graduates. They join our training class and spend their time in the classrooms while the school is in session."

SOUTH CAROLINA: "No provision for such practice is known."

TENNESSEE "Unfortunately there is not opportunity for students to get such practice."

TEXAS: The State University and normal schools have made no provision for practice teaching nor for adequate observation. "In some cities by means of a system of supernumerary teachers they can." Austin: "We do not employ teachers who have not had practice." Dallas: "We do not employ inexperienced teachers for high-school work."

VIRGINIA: "No." "In our grammar schools" only. "Practice at our normal schools."

WEST VIRGINIA: The Huntington Normal School admits students of the training department who expect to do high-school work to the classes of the regular academic department, which more than covers the high-school courses, and practice teaching under the superintendent of the training department.

SUPPLEMENTARY REPORT

At the request of the chairman of the committee, the following is offered in response to the two inquiries.

1. What professional preparation is *desirable* for southern secondary-school teachers? and,

2. What professional preparation is *possible* under existing conditions for southern secondary-school teachers?

The high school of the South possesses problems which are not marked by any geographical peculiarity. These problems are national and not local. If any peculiarity obtains it is due primarily to its historical descent from the old-time southern classical academy. This historic connection will, in large measure, explain the presence of the classical or literary flavor which obtains and also the custom of college graduates becoming secondary teachers. The industrial or technical high school in the South is the exception.

It is also a mistake to assume or maintain that the secondary school in the South materially differs from that in other sections of the United States. The factors of waste in the population and the economic conditions for developing native resources and sustaining human industries do not, aside from imitating the material resources of high schools, determine the question of the southern high school for the whites. It is chiefly the high school for the negro which has its questions determined by those conditions as related to the negro.

One fact which indicates that southern high schools cannot be regarded as *sui generis* is the employment in them of teachers prepared by northern institutions. The pursuit of studies in the latter by native southern teachers points in the same direction. The demand for professional secondary training is therefore the same in the South as in the North; or, to be more accurate, is growing to be the same. The above report on existing conditions indicates the widespread recognition of this demand.

There are a few features in secondary training made desirable, if not necessary, by reason of their intimate relation to successful secondary teaching. The best high schools of the day are, and all high schools of the future will be, departmental. This is required for efficiency, and indicates the degree of scholarship needful for high-school work. But secondary teaching tends to become too exclusively departmental so as to prevent the teachers getting a

sufficient knowledge of the pupil as an individual who has passed up through definite school processes. High-school teachers forget the childhood of the pupil which has been passed in the grades. No less do they lack a sense of the unity in the work of the high school as a whole. Correlation of all the secondary-school factors is necessary, and this can be made real only through adequate professional training.

Under existing conditions there are three means, suggested by actual experience in the administration of high schools, available for equipping teachers more effectively for the high school:

1. City systems could require that college graduates aspiring to high-school positions should become elementary teachers, for a time at least. This would make the schools responsible for "professionalizing" their own teachers.

2. Normal schools could add to the work they are already doing a department designed to prepare secondary teachers. This is possible in all the states, except Arkansas and Mississippi, where state normal schools do not exist.

3. Colleges and universities could add a year's course of study, which, presupposing the Bachelor's degree, would provide special preparation for the secondary teacher. This work would be an intensive study of what I call the pedagogy of the high school. This would include the history of the high school (particularly in the United States), the psychology of adolescence, methods of recitation in the high school, review of elementary-school processes, review of secondary subjects for specialization in the light of the foregoing and in the interest of effective correlation of departments and subjects, and the ethics of adolescence as related to the development of the institutional tendencies peculiar to the high-school student and American life in general. This work would not treat the high school as an isolated part of the public-school system. This work could also presuppose much of the work now done in education as a part of the provisions for the Bachelor's degree. This postgraduate work could then lead to the Master's degree in education, and thus become somewhat of a professional degree for teaching, corresponding to similar degrees in engineering, law, etc. This is possible in view of the fact that numerous leading high schools have already established for themselves the custom of giving preference to applicants who possess the Master's degree, even on the basis of the usual academic work.

4. Practice teaching in a *model* high school is probably not demanded as a part of this professional training. Where possible, visitation, observation, and, perhaps, some teaching in the school where one is to be employed, could better replace the model practice. At least the widespread custom of probationing new secondary teachers strongly indicates the necessity of each school fashioning its own teachers finally in accordance with its own best spirit and traditions.

Into the question of professional requirements after the secondary teacher gets into service it is not meet for these suggestions to enter. Most of the foregoing suggested requirements are now practically recognized in many

localities, and it is possible under existing conditions to standardize them thruout the South and the nation at large.

XIV (*special*)

CAPACITY AND LIMITATIONS OF THE NORMAL SCHOOL IN THE PROFESSIONAL PREPARATION OF HIGH-SCHOOL TEACHERS

JOHN W. COOK, PRESIDENT NORTHERN ILLINOIS STATE NORMAL SCHOOL

The battle for the professional preparation of teachers for the elementary schools is substantially won. The educational people are of one mind with regard to it and the general public approves the action of its representatives in making appropriations from the state treasuries for the establishment and maintenance of normal schools. While these institutions are not limited, ordinarily, by their charters to the preparation of elementary teachers, at least not in this country, the extreme demand for teachers of that class has furnished such a practical limitation in the great majority of cases. Here and there, however, a normal school has been influenced by college traditions and has developed so strongly on the academic side that many of its graduates have become teachers in secondary schools.

The marked advantages that have come to the elementary schools thru the professional training of their teachers has awakened a warm interest along similar lines among the high-school people. This is the most logical of consequences, and the practical question that is now up for discussion with them is with respect to the instrumentalities that should be employed in the technical preparation of teachers for their schools. Certain of the normal-school principals believe that their institutions are admirably equipped for such service and submit a statement of what they have been doing in that direction for some time in proof of the wisdom of their contention. Others hold that the needs of the two classes of teachers are so divergent that it is unwise for the normal schools to attempt to cover both fields. In attempting to discuss this question I have the possible disadvantage of being connected with a school which has no particular ambition in the way of preparing secondary teachers. In our study of the question it will be well to set the demands of the two classes of school as near each other as possible and thus to determine by such a juxtaposition the degree of variation and its bearing upon the problem.

I. GENERAL SCHOLARSHIP

Instruction is one of the necessary functions of the teacher. It may be defined as the canceling of the inequality in knowledge that exists between the teacher and the pupil. The inequality, therefore, is presupposed. Nothing more certainly and more quickly undermines the respect which the pupil should feel for his teacher than the suspicion that he is not a respectable authority in the subjects in which he attempts instruction. As Rosenkranz aptly remarks: "His authority over his pupil consists only in his knowledge and

ability. If he has not these, no external support, no trick of false appearances which he may put on, will serve to create it for him." He richly merits the contempt which his presumption and dishonesty will inevitably provoke. A wide gap in knowledge between the teacher and the pupil is demanded, not alone in the interests of accurate and inspiring instruction, but, as well, by all of the ethical relations of the school.

The immediate demands for knowledge in the two classes of schools under discussion are widely variant. The curriculum of the elementary school is, of necessity, narrow and superficial when compared with that of the high school. The first four years are mainly confined to the acquisition of a fair degree of mastery over the tools of culture. In the last half of the course there is an ascent into the elements of the knowledges, but, usually, the grammar school leaves off where the high school begins.

It goes without saying that, other things being equal, the broader and more thoro the scholarship the better the teacher, regardless of the grade in which he is employed. The imagination fondly dwells upon what would be possible if in every school there were a liberally educated teacher. That is an inspiring ideal to nourish as we press on to better things, but its realization is entirely out of the question at present and will be for an indefinite time to come. Where the highest welfare of human beings is concerned it is a rude shock to our fine idealism to have such material considerations as a mere lack of pecuniary resources determine matters of such supreme and far-reaching moment. They will push themselves into prominence, however, and will determine in large measure the course of events, whether agreeable to our ideas or otherwise.

With regard to the matter of general scholarship it may be said that graduation from a high school having a good four-year course implies an academic preparation which answers the needs of the elementary school very well. It furnishes, also, a good basis for the normal school to build upon in the professional training of teachers for that grade. If such a condition were the rule there would be a radical improvement in the educational status of the Middle West. The superintendent of public instruction of the State of Illinois, in his latest report, 1903-04, furnishes the interesting information that there were teaching in 1904, in seventy-two counties of the state, 4,428 persons whose training had been acquired wholly in the elementary schools. Such conditions seem deplorable enough, yet their case would be paralleled by teachers in secondary schools who have had only high-school training.

If the contention for a good high-school course as an academic preparation for the elementary teacher be justified, a college or university course, or its equivalent, would seem to be demanded by the same logic as a foundation for the high-school teacher. This is not unreasonable and is rapidly becoming the rule. Because of the relatively small number of high schools the scholarship problem for their teachers is not a very grave one; at least it is far less difficult than the corresponding problem for the elementary schools. Indeed,

the reasonableness of this higher discipline demand is so apparent that an argument in its defense seems quite unnecessary. The work of the pupil should be seen in sufficient perspective to bring out its meaning or it is likely to fall into a hopeless formalism. There are certain phases of school work that are purely mechanical and that may be conducted after a fashion by any of the pupils of a given class. The Jesuit schools employed the idea advantageously as they were conditioned, but Bell and Lancaster worked it to death. Such crude attempts at educating children had some defense a century ago but they should long since have become obsolete. Unhappily they are still present, and very much in evidence, too, as is proved by the statements quoted. It ought not to be difficult to save the secondary schools a similar fate. Happily the studies are of such a character as to make it comparatively easy to detect the incompetents in scholarship, for they are quite sure to meet with early disaster in their attempts to teach what they do not know.

II. SPECIAL SCHOLARSHIP

The advantages arising from an intensive study of subjects, in the interests of departmental instruction, are so apparent that many of the elementary schools have adopted that method of teaching. In consequence, children of ten or twelve, or even of tenderer years, march from room to room like young collegians, to receive the instruction of teachers who are specializing, whether they are specialists or not. They are thus anticipating the experiences of the high school and college. It is quite possible that our sympathies for the orphaned neophytes may be misplaced, but there can be no doubt of the wisdom of applying the method in the high school. I am not disposed to object to its application in the upper grades to a limited extent, but the amount of specializing in the elementary schools will not be great for some time to come. We have come to expect the teachers of manual training, of music, of domestic economy, and possibly of drawing, to be specialists. For the ordinary branches, however, one teacher of real ability has many advantages over a group of specialists. The children need continuity of control and a warm and intimate relation to one person. There may be something in the remark of a little girl who had been a pupil in a normal training-school and was transferred to a city school under a single teacher. She was "tired to death by seeing the same teacher in the same dress all day long." But she must be classed among the exceptions. The subjects of instruction are within the reach of fair scholarship. The lessons are neither long nor difficult. Where specialization is demanded it is of a simple sort and yet ample in its extent and thoroughness for all of the needs of the elementary school.

With the secondary school the case is quite different. It has become in reality what it has sometimes been called, the people's college. With its modern equipment of library and laboratories and shop and kitchen and sewing-rooms and business department and all of the rest, and with its extended course of literary work beside, it has outrun the old-fashioned college of fifty

years ago in many directions. While the transition from the eighth grade is a trifle abrupt, perhaps, and the freshman year may be a little bewildering, the pupil is well established by the beginning of the second year and is soon doing a kind of work that a teacher cannot handle satisfactorily without more than the ordinary general training that the college does. Ancient and modern languages, mathematics, literature, science, and others of the high-school subjects call for teachers who have done a good degree of special intensive work. This is also the view of most of the high-school people who are conducting really superior schools either as preparatory to the university or as a training for life.

I know that the young doctors of philosophy quite often make a sorry mess of their teaching, carrying the methods of the university into the high school; but that is because of their lack of training in teaching, a discipline which many of them regard with lofty disdain. Their scholarship is an extremely desirable qualification and when they have learned to use it advantageously they will be a great blessing to their pupils. The high-school boys and girls need the vitalizing contact with genuine scholars and they will never be more susceptible to their influence than when in the high school and within the hero-worship epoch.

III. NORMAL SCHOOLS

Can the normal schools meet the demands of general and special scholarship which have been suggested as essential to the best success of high-school teachers?

That depends upon the character of the normal schools. Indeed, there is no normal school, but there are normal schools. In no other group of educational institutions will there be found such infinite variety. Included under the term will be found schools that are as widely separated as the Superior Normal School of Paris and some of the small private "normals" that maintain a precarious existence from the fees paid them by ambitious boys and girls who want to get enough of the "common branches" to enable them to get a second-grade certificate to teach a country school. The former is in a class by itself. Perhaps the same is true of the latter. Its faculty has enrolled many of the most notable French scholars of modern times. Names like Pasteur's adorn its catalogues. No American normal school has approached it in the extent of its academic curriculum. As to the ability of such an institution to furnish general and special scholarship for teachers of high schools or of colleges there can be no doubt.

A fair number of our western normal schools, anxious to compete with the colleges or even with the universities, in the extent of their courses of study offer a training in scholarship that ought to qualify their graduates, in that respect, for instruction in secondary schools. I quote from President Seerley, in the *Fourth Year Book* of the Society for the Scientific Study of Education, Part I, who discusses the "Relative Advantages of Universities and Normal Schools in Preparing Secondary Teachers." He says:

The record of the Iowa Normal School is cited, not because its scheme of work is ideal nor its plans perfected, but because its organization permits the training of all classes and all kinds of public-school teachers. This condition has existed for only a few years and yet its graduates have taken an active part in the work of secondary education. It is true that they are among the more successful teachers, and that their influence upon the spirit and tendencies of education is unequaled by any equivalent number of teachers who have received their training in other kinds of educational institutions.

- He then proceeds to show that there are nineteen high-school principals, twenty-three city superintendents, fifty-eight department teachers, ninety-one village principals, and fifty assistant principals who have received all of their preparation in that institution. Here are 241 persons, a sufficient number to generalize with regard to that particular school, "whose influence upon the spirit and tendencies of education is unequaled by any equivalent number of teachers who have received their training in other kinds of an educational institution."

It would be interesting to know just what preparation these pupils had when they entered the Iowa State Normal School, how long they remained there, and what courses they pursued, to what degree they specialized in the branches which they are teaching. Possibly President Jones, of Ypsilanti, and President Kirk, of Kirksville, may have similar statements to offer, for their schools give advanced instruction in high-school subjects. I may add in support of the general proposition implied in President Seerley's statement, that some of the best high-school teachers of my acquaintance and some of the best city superintendents in this country received all of their school training above the elementary grade in the Illinois State Normal University, at Normal. The former have been teaching in the same schools for many years and have developed their work by their private study, while the latter owe rather more to their experience, I suspect, than to the school.

This widening of the academic instruction of the normal school is by no means a modern innovation. It is rather the original conception of the ideal method of training teachers. Such a system was in operation in New York when the first American normal school was established, at Lexington. The discussion between the advocates of the two systems—an independent normal school, on one hand, and a normal department as an attachment to an academy, on the other—was protracted and intense. It is an instructive chapter in the history of American normal schools. It was finally decided, in Massachusetts, to adopt the former plan and normal schools generally, in this country, have followed the Lexington leadership, not excepting the New York schools. Where there has been but one normal school in a state there seems to have been a stronger disposition to accent the academic aspects than where there are more.

What objection can there be to such an organization of the normal school? That fine things have been done by schools having such an organization must be admitted in the presence of testimony that is so convincing. It is assumed in this discussion that the primary purpose of such an institution is the pro-

professional preparation of teachers, as the primary purpose of a law school is not general culture but the professional preparation of lawyers. I suspect that this proposition will be admitted by all normal-school faculties. The divergence will come when the method of preparation is up for discussion. If this is a correct view of the function of the normal school the constant and insistent preoccupation of everyone connected with the management of the institution will not be general or special scholarship of an academic sort, but will be special scholarship relating to the teaching art. Anything, then, that tends to minimize the main interest of the school, or what should be its main interest, must be regarded as hostile to the fundamental purpose of the institution.

Where there is a strong accentuation of the academic idea and a rich development of it at the expense of the professional idea it ought not to call itself a normal school, but an academy or college with a pedagogical annex. I do not forget that I shall be accused of thinking more of an equipment of method than of an equipment of subject-matter to which to apply it. Such an accusation would be unjust. I have no faith in pure form; indeed, such a conception is beyond my capacity. I assume as thoroughgoing scholarship upon which to found the pedagogical instruction as any advocate of the "academic" normal school. I plead for the time which ought to have been spent in other schools of a different character and that should be presupposed, in order that it may be spent in a sincere and rigorous study of the science and art of education.

The simple truth is that it is far easier to run along the old lines, long since marked out by the colleges, than it is to develop a satisfactory course for teachers. Because such courses are yet in the formative state and require the most persistent effort and the most laborious investigation, if they are to be of real worth, there is no little scepticism, even in some of the normal schools, as to their making much of a demand upon the intelligence of the students. I quote from one of the most eminent of the advocates of the academic scholarship idea, a man whose success is the strongest argument for his view: "If the students getting ready for a teacher's career get nothing from a normal school except professional instruction and technical training, it is quite certain that a majority of them would mentally perish from the monotony of the effort, and would find it necessary to decline to continue such unpalatable work." This seems a strange utterance for a normal-school president and implies that, in his opinion, pedagogy has not developed enough in the way of a fruitful content to become the predominating subject of instruction in a technical school.

It seems to me to be more than probable that the strictly professional aspects of training will be neglected in an institution that engages largely in the pursuit of the knowledges for their own sake. The great majority of the teachers in such schools will devote themselves to their mathematics and literature and science and the rest and, in consequence, the pedagogy will

get scant attention. On the other hand, if the school is really absorbed in what would seem to be the characteristic function of a genuine normal school there would not be space nor inclination to furnish the general and special scholarship in the knowledges that must be presupposed in any good scheme of professional instruction. My conclusion, therefore, is that the normal school is not well adapted to the work of the college, and to the extent that it attempts it there will be a falling-off in the quality of the work along professional lines which it was especially organized to do if it was sincere in the selection of its name. There will not be that unity of sentiment, that enthusiastic devotion to the study of childhood, that open-mindedness with regard to the course of study, that willingness and desire to submit the methods of the classroom to the test of the most rigorous criticism in the light that has been thrown upon teaching by the sciences that relate to the correlated life of body and mind, that ought to be found in a teacher's seminary.

IV. TRAINING FOR SECONDARY VS. ELEMENTARY TEACHERS

Can the normal schools having the ordinary organization give satisfactory professional training to secondary as well as to elementary teachers?

It is quite generally conceded, at last, that the normal schools are doing a fair piece of work in the preparation of elementary teachers. If it is really possible for them to do as well for secondary teachers the agencies are at hand for the solution of a problem that is pressing with growing urgency upon the minds of the educational people whose chief interests lie in the secondary schools.

That the training that elementary teachers now receive would be of great value to secondary teachers I do not for a moment doubt. The high school presupposes the elementary school, hence it presupposes the first twelve or fifteen years of the life of the child. To have a fairly accurate conception of what has been going on in these wonderful years is to have a most admirable preparation for the high-school period. Many of the colleges and universities have been so favorably impressed with the work of the state normal schools that they are willing to admit to their junior classes such of the graduates of their two-year courses as were ready for the university when they entered the normal school. With suitable work in the higher institutions, in the way of liberalizing their scholarship, such persons become admirable teachers for secondary schools. Their professional training identifies them very thoroly with the teaching idea. Their disciplines in the university redeem them from the narrowness of a limited grasp of the higher development of the knowledges, and stimulate them in a most interesting way along the lines of superior scholarship. No students are more enthusiastic and few are so ambitious for professional scholarship with all that it implies in the way of general and special scholarship in the knowledges. Of course they have much to learn about the high-school boy and girl and of the educational values of the secondary curriculum. But they are extremely desirable, as a general proposi-

tion. Large numbers of them are extending their courses of study in this way and are doing fine things, in consequence, for the high schools. Their university work is done with the thought of teaching running thru it all, and they thus have the advantage of assimilating and estimating notions. Their training and experience along professional lines give them the apperceiving conceptions by which they can make the most of their new disciplines. Where they are willing to do more postgraduate work in the teachers' colleges they become quite ideal and indicate to us what is really meant by a professional teacher.

That the normal schools must prepare elementary teachers is, I think, universally conceded. If they should not do this they ought to surrender their charters and reorganize as teachers' colleges. Now the thing of all things that is fundamentally necessary to the grade teacher is the warmest sympathy with child life and the clearest understanding of the best methods of its motivation. She must make up her mind to live with childhood. She must shorten her step to its slow intellectual pace. She must content herself in her school work with the simplicities of elementary knowledge, so far as her teaching is concerned. She cannot hope to have her recitations filled with the intellectual delights that come to the teachers in the secondary and superior schools. The demands made upon her are peculiarly exhausting, since alertness, vivacity, constant watchfulness, genuine mothering, are the price of any success with young children. Real comradeship with them, in any reciprocal sense, is hardly possible. Because of these trying conditions the normal school must be suffused, surcharged, saturated, with interest in the young child. In a very true sense he is clay in the hands of the potter. An unsuitable position for a considerable portion of each day may mean curvature of the spine, with all of its attendant penalties. A neglect to attend properly to the quantity and disposition of light may result in defective vision, with all of its embarrassing handicaps. Windows carelessly left open may entail catarrhal troubles with all of their evil and offensive consequences. Improper desks mean possible round shoulders. Everywhere there is physical plasticity, but a vanishing plasticity, leaving behind it symmetry, if the teacher is wise and watchful, or deformity, if she has been neither.

In the mental life there is the same impressibility. It is a time of beginnings and relative helplessness. Nothing is easier than a maladjustment of tasks against which the child is too ignorant to file a conscious protest. Few things are more difficult than a generous understanding of the opening life, a discovery of the employments most suitable to its successive stages, and a proper adaptation of the latter to the former.

When the high-school stage arrives a radical change in the development of the pupil is at hand. New ambitions are awakened. The old routine, for which the growing child has a very hospitable place in certain periods of his unfolding, has become inexpressibly irksome. Individual initiative succeeds imitation or obedience. The social instincts are quickened. Sentimental

attachments suddenly blossom out with exaggerated efflorescence. In brief, the multitudinous phenomena of adolescence, with all of their iridescent changes, appear and childhood is a thing of the past.

How can a school whose main prepossessions are in the directions of childhood meet in the most satisfactory way the demands of a school whose most absorbing interests should be in the unstable, emotional, transforming epoch of the adolescent? How can it furnish the atmosphere and the requisite guidance for two such dissimilar stages of growth when each seems to demand, in the interests of the best results, the exclusion of the other? Let us remember that we are seeking not fairly good conditions, but the best conditions. This is one of the aspects of the secondary teacher's preparation that the normal school seems not well fitted to give.

But the intellectual attitude changes quite as radically as the emotional. The teaching, or instruction, must be greatly modified in its method. It is true that in the higher grades it approaches that of the high school, but in the lower grades it is quite radically different. Imagine the primary teacher employing the Socratic irony! Yet in the high school it has a legitimate place altho not a prominent one. The young child has slight critical capacity upon which the teacher can bank. His drawings of the human form lack necks and attach the arms to the side of the head, yet they do not offend his notions of accuracy. The high-school pupil needs the challenge, the cornering, the defeat, perhaps, as well as the sympathetic attitude of praise and agreement. He has found footings which give him confidence to hold his own against the contention of a teacher, perhaps. Scholarship is a possible passion and the subjects of instruction more and more absorb his mind. The studies are new and demand a new emphasis. The younger child is chiefly occupied with the individualism of the world, but the high-school pupil seeks more and more to find the unity as well of the phenomena of the world. To state it a little differently, the high-school age is the stage in which the pupil is entering upon the epoch of conscious reflection; he is beginning the more explicit identification of himself with the genius of the modern world, which is essentially scientific. These epochs of growth are so generally recognized that I need not follow this line of thought further than to say that the method of observation and illustration must now give way in a growing degree to the method of demonstration in which the necessity of the relations is made apparent.

It may be answered that the normal school is capable of adjusting itself to these varying conditions by organizing separate departments which shall not overlap each other. But this is only another way of saying that the two classes of schools may exist side by side under the same general management. That is true enough, but that will make a sort of university of the normal school and there will be necessitated an elaborate and distinct equipment for each. As there must be a training-school for the elementary teachers so there must be, for the highest success, a parallel opportunity for the secondary

teachers. I do not advocate an exact parallel, but an application of the same general principle.

I must content myself with one additional suggestion. It is quite possible for the normal school to present the general features of a pedagogical philosophy. It must be very general, however, to be comprehended by all. It may be carried to higher and higher planes as the ability of the pupil renders it possible, and such a development of the subject is extremely valuable in toning up the general character of the institution. But each subject of the curriculum needs a method treatment which unfolds its inherent logic and its adaptation to the needs of the developing pupil. For illustration, arithmetic must be studied from a new point of view. The normal student had his last contact with it in the grades of the grammar school while on his way to the high school. He was then too young to be conscious of his own generalizations or to rise to any just conception of the unifying ideas that make it a science. The subject must be re-examined from the standpoint of its logical organization so that the student can look down upon it as it emerges in all of its seeming complexity from a few very simple principles. This is what is meant by the normal-school people when they declare that their work upon the subjects of the course of study is not academic but professional.

What has been said with respect to arithmetic is to be considered as said with regard to the other subjects of the elementary school. But the subjects of the secondary school need a similar treatment and such a suggestion implies an academic preparation that a college course will barely cover. If we are to have really superior teachers for the secondary schools we must not be satisfied with anything short of what Germany is doing for her schools of that grade. It is absurd to expect our existing normal schools to accomplish any such results. Meanwhile, these institutions are the only existing agencies, except the teachers' colleges and pedagogical departments of the universities, that can afford any great relief at present. The latter are so few in number that they can accommodate very few relatively. The former are fewer still but they are having a profound influence. Until the present ferment shall have aroused the public mind to the necessity of making the secondary schools as attractive pecuniarily as the colleges—and why should they not be?—men and women of superior ability and preparation will not select them for life-work except in occasional instances where principalships pay a living wage. A few miles from where I am now writing is a township high school. Its principal is a graduate of the Illinois State Normal University and of an excellent Ohio college. He is a professional teacher in all that the name implies, and the community regards him as a good bargain at something like thirty-five hundred dollars a year. He took his professional course before his college course, but he served a long apprenticeship as an assistant before he rose to the dignity of principal. He is a good illustration of what I have had before my mind as I have written of the secondary teacher and of his preparation, altho there should be an educational institution which could do for him in two or

three years what he did for himself in several times two or three years while he held a subordinate position.

I have made an incidental reference to the practice school as a feature of the institution that will prepare secondary teachers. Doubtless the work of the normal student in actual teaching under normal conditions, altho done in the elementary grades, will be of material help in high schools. There should be an opportunity to study a model high school and also to do actual teaching work as a part of the preparation of the secondary teachers, however. The problem is far more difficult than in the elementary school because of the greater maturity of the pupils and of their more fully developed consciousness of the work of their teachers. It can be done and well done if deferred until the scholarship and maturity of the teacher are of such a quality as to win the confidence of the pupils. What is at first lacking in skill can be compensated for by a fine culture and attractive personal qualities. Persons of such attainments understand the meaning of criticism and accomplish in a few weeks under such conditions what would otherwise cost months or even years of experience, if they were ever able to achieve it at all.

I have not dared to discuss those other very desirable qualities of the secondary teacher which are matters of individual personality rather than the result of professional training.

My conclusion as the result of my experience and study is that the normal school as generally organized at present is not the best possible agency for the preparation of secondary teachers.

XV (*special*)

PROFESSIONAL TRAINING OF TEACHERS FOR THE SECONDARY SCHOOLS OF GERMANY

CHARLES DEGARMO, PROFESSOR OF THE SCIENCE AND ART OF EDUCATION,
CORNELL UNIVERSITY

CONDITIONS OF ADMISSION TO EXAMINATIONS

The so-called secondary schools of Germany cover a period of nine years in the educational life of the student; roughly from nine or ten to eighteen or nineteen years of age. The first three years of this course may be said to belong to elementary, the next four years to secondary, and the last two years to higher education. To be trained for such a school, the candidate needs the professional preparation of the elementary, the high-school, and the college teacher. To meet such conditions the Germans divide their certificates in the various subjects into first and second and third grades, the scope of which will be explained later.

It takes some sixty closely-printed pages to describe all the requirements for the granting of these certificates in Prussia alone. Many of them relate to social, economic, and educational conditions which find no counterpart among us. For this reason, the statement of what is required in the German

professional preparation of teachers for this class of schools may be greatly abridged.

One of the fixed ideas in Germany is that the candidate for teaching in the higher schools must first be brought to the stage of productive scholarship. Two antecedent conditions are therefore prescribed for eligibility for the later professional examinations. They are as follows:

1. Graduation from the full course of a *Gymnasium*, a *Realgymnasium* or an *Oberrealschule*, each of which is nine years long, and admits to the university.

2. Evidence that the subjects in which the candidate wishes to qualify have been studied in an orderly manner for at least three years in a university.

When these and a few other minor conditions are satisfactorily met the candidate is admitted to the examinations for certification.

THE EXAMINATION COMMISSIONS

These commissions are composed mostly of university professors, together with a few secondary school men, all of whom are named by the minister of education and serve for one year. In general, there is a commission in each university town, there being ten of these bodies in Prussia. The candidate is required to present himself before either the commission located where he spent his last semester of university residence, he having already completed one other term there, or the commission in the district where he proposes to teach. Provision is made to prevent too many candidates from being admitted in any one district by transferring their applications to other commissions, and also for the reception of candidates coming from other German states or foreign countries.

SCOPE AND CHARACTER OF THE EXAMINATIONS

The examination consists of two parts, one general and one special.

The general subjects are philosophy, pedagogy, and German literature; also for those who expect to teach religion, the doctrines of the Evangelical or of the Catholic church.

The special examination is upon the subjects the candidate expects to teach, which are to be divided into majors and minors, examination in at least four being required.

The subjects chosen must be taken in the following combinations:

Latin and Greek; French and English; history and geography; religion and Hebrew; pure mathematics and physics; chemistry with mineralogy and physics; or, instead of physics, botany and zoölogy, with the understanding that German may take the place of either of the subjects in the first three groups or of Hebrew in the fourth. Applied mathematics is also a subject for examination, to be preceded, however, by pure mathematics.

The minimum requisite for any kind of a certificate is that the candidate shall be satisfactory in the general examination, and shall obtain first rank in at least one subject and second rank in at least two of the others.

First rank in any subject entitles the holder to teach it thruout the nine grades of the school. The holder of a certificate of second rank in any subject is entitled to teach that subject only thru the first six grades, that is, up to and including *unter secunda*.

It is in general expected that the candidate will select at least two majors and two minors. He may, however, select more of either or both, supplementary examinations being subsequently allowed in order to enable him to extend the range of subjects he is certificated to teach. Dean Russell states that few teachers ever secure first rank for more than three subjects.

Both the general and the special examinations are partly written and partly oral. The written work, however, is quite unlike the sort we are accustomed to in this country, for it is prepared at home in the form of essays with full liberty to use books to any extent desired. Only personal assistance is forbidden.

One essay is upon some theme in philosophy or education; other essays are upon themes selected from the candidate's major subjects. Six weeks are allowed for each essay, with a possible extension of the time to six weeks more. In this written work the design is to test the sufficiency of the applicant's knowledge, the adequacy of his judgment, and to show whether or not he is capable of a logically arranged, clearly and adequately expressed exposition of the subject in hand.

In the oral examination upon the general subjects, the following points are to be established:

1. In religion, whether or not the candidate shows himself well acquainted with the content and connection of Holy Writ, has a general knowledge of the history of the Christian church, and knows the chief doctrines of its confession.

2. Whether or not in philosophy he is acquainted with the important facts of its history, with the important doctrines of logic and psychology; and also whether he has read one of the more important philosophical masterpieces with comprehension, such as Locke's *Essay Concerning Human Understanding*, Berkeley's *Principles of Human Knowledge*, Kant's *Critique of Pure Reason*, or Schopenhauer's *Die Welt als Wille und Vorstellung*.

3. In pedagogy, whether or not he has grasped its philosophical basis, knows the important stages of its historical development since the sixteenth century, and possesses some understanding of the problems of his future calling.

4. In German literature, the examination is to show whether or not he is acquainted with its general development, especially since the beginning of its springtime in the eighteenth century, and that since leaving school he has read with understanding its more important works.

Needless to say, the oral examinations in the subject-matter to be taught are the most searching and thoroging of all. The candidate need not expect that the examiners will not sound all the depths and shallows of his knowledge.

An idea of the range of the examination may be gained by the prescriptions for those who would teach English.

As a preliminary the candidate must show that he has a good elementary knowledge of Latin and can correctly translate the easier writers, like Caesar, at sight. Then come the regular requirements, as follows:

1. For the second grade: Knowledge of the elements of phonetics, correct and ready pronunciation; acquaintance with the etymology and syntax of the grammar; possession of a sufficient vocabulary of words and phrases and considerable practice in the use of the speech; outline of the course of development of English literature since Shakspeare and reading knowledge of the important poetic and prose writings of recent times; capacity for facile translation of well-known authors into German, and the power to compose in English without gross errors.

2. For the first grade: Oral and written use of the language, not only with the grammatical accuracy arising from scientific grounding in the grammar, but also with more extensive acquaintance with the vocabulary and idioms, as well as a capacity to use them with a facility adequate to the demands of instruction; general knowledge of the historical development of the language from the old English period; knowledge of the development of the literature united with a thoro reading of a number of eminent writings from the earlier periods to the present; insight into the laws of English versification, both in early and in late periods; acquaintance with the history of England, as well as with the proper exposition of texts in use in schools.

It is remarked that an especially excellent knowledge of modern English literature or an unusual mastery of the tongue as now used, may be accepted in lieu of corresponding deficiencies in any of the foregoing requirements.

Should a successful candidate receive third grade in any subject, he is permitted to teach this subject only in the first three grades of the school, i. e., in the elementary classes.

The final certificate covering the various subjects is ranked according to the number of first-, second-, or third-grade ratings received. A first-rank certificate means that the holder has received upon examination either two majors of first grade and two minors of second grade, or two majors and one minor of first grade, and it entitles him to future appointment to the position of head teacher, with the title of professor.

A second-rank certificate means that the holder has not reached the minimum above described, and that he will be restricted to the position of ordinary teacher (*Oberlehrer*). (See Russell, *German Higher Education*, pp. 352-369.)

Arrangement is made for various supplementary examinations to make up deficiencies.

It requires at least a year after leaving the university to prepare for and pass these various written and oral examinations.

THE SEMINARY WORK

After all examinations are out of the way, the candidate is required to pass one year in so-called seminary training, either at one of the twelve state seminaries for this purpose, or at some one of those established at *Gymnasiums* and *Realgymnasiums* by the rescript of 1890. From three to seven candidates successful in the examinations constitute the students in a given seminary for the year. They are under the charge of the director and one or two of his ablest teachers. The aim is to make the candidate thoroly acquainted with the work of the school with which the seminary is connected, and to give him opportunity to do some trial teaching under the guidance and criticism of the director and his chosen assistants. The first quarter-year is spent in observation in all classes and in all subjects. During the second quarter he makes his first attempts at teaching according to the directions of the leaders in charge. From these beginnings he gradually enlarges his teaching-sphere until he gives lessons during the whole hour, and often for a succession of hours, but always under the inspection of one of the regular teachers. The candidates are also intrusted with the examination of written work of the various classes. The instruction in any given subject closes with a sample lesson, at which the other candidates, the director, and the other teachers are present. Following this lesson at a suitable time there is a critical discussion of its merits and defects. At least two hours a week must be devoted to a session with the candidates, usually led by the director. There is much latitude allowed as to the choice and treatment of subjects at these sessions. Formal reports are relieved by informal discussions.

Toward the close of the year the candidate hands in a somewhat extensive essay upon some concrete pedagogical or didactic problem assigned by the director. At the end of the year the director sends to the provincial school board an elaborate report of the year's work. Upon the basis of this report, together with the results of previous examinations, the board admits the candidate to his final test, the year of cadet teaching in some *Gymnasium* to which he shall be assigned. This is called the *Probejahr*.

THE YEAR OF CADET TEACHING

Das Probejahr

For the year of trial teaching the candidates are assigned in pairs to the various *Gymnasiums* or *Oberrealschulen*, when they teach from eight to ten hours per week under the guidance of older teachers. They must do a certain amount of supervision, attend faculty meetings and identify themselves in every way with the life of the school.

Up to the end of this year they have received no pay whatever, but if their record is approved at the end of the trial year, their names are enrolled on the list of teachers eligible to appointment in the higher schools of the province. When so appointed they are teachers and state officers for life, assured that

with reasonable diligence they will have employment so long as they are able to work and then—a pension for the remainder of their lives.

COMMENTS

That all teachers in German secondary schools are men is a well-known fact. It may well cause astonishment in the United States where the number of men teachers not only shows no proportional increase, but suffers rather an absolute annual decrease, that any country can by any possibility induce enough men of approved quality to meet conditions so strenuous as to knowledge and professional training. The minimum is as follows: three years in the primary schools, nine in the *Gymnasium*, three in the university, one in examinations, one in the seminary, and one in trial teaching—eighteen years in all, not to speak of the one year of military training exacted of all able-bodied young men. Yet the seminary year was added in 1890, not so much that there might be more training, as that there might be fewer candidates.

To understand a situation like this, one must bear several facts in mind.

In the first place, the secondary schools are not democratic in our sense of the term, for the common schools, in which nine-tenths of the children of Germany are found, do not open into them at all. The *Gymnasiums* and hence the universities exist therefore not for the people as a whole, but for the education to those who form the professional and official classes. As a rule, it does not occur to a German university graduate that he might go into industrial life, and even if the idea did occur to him, it would soon be dismissed, for his training has been professional and leaves him unfitted for success in any other field. Broadly speaking, there is nothing for the German university graduate to do except to practice the profession for which he has been trained. If this chances to be teaching, a teacher he must be—or nothing.

If now it should be the case that candidates for the professions, teaching included, should increase faster than the population increases, it may easily be seen that what Bismarck called an educated proletariat would be formed. That is, a class of men who have their skill and nothing else to offer, and who might, indeed, become *Hungercandidaten*.

What are the facts? In the period from 1851 to 1861 the number of students in the German universities was 335 to each million inhabitants. This ratio remained substantially unaltered until 1871. From 1871 to 1876 the number rose to 386. From this time on, the development has been rapid. By the end of the year 1880 the number of students had risen from 13,029 in 1836 to 28,861. By the end of 1890 the number had risen to 32,756, and by 1905 had reached a total of 42,435, or over 705 per million inhabitants. This means that during the last thirty years the attendance at the universities has grown twice as fast as the population, and that consequently the demand for places in civil offices, in law, medicine, theology, and teaching has enormously increased. There are in general two applicants for every place, and, further-

more, a class of applicants who must have the kind of places they have been prepared for, since they are unfitted for anything else.

In American universities at present it is difficult to get good men to consider teaching as a career, the transition to industrial life being so easy and its prospective monetary rewards so attractive. That we could successfully impose the German conditions for entrance upon the work of high-school teaching is not to be imagined. Few men would apply, and the public would revolt in the case of women.

Furthermore, we have no means for carrying out any general system of cadet teaching, since local autonomy would place this matter at the individual disposition of the various school boards. It remains to be seen whether we could not by some system of benefits to individual and community induce high schools to undertake this much needed work. Candidates would serve for little or no salary, if only they were assured of a reasonable expectation of employment at the close of their cadetship, while school boards would consent to this arrangement if it were evident that on the whole the schools and the community would thereby be educationally benefitted.

XVI (*special*)

THE PRESENT TRAINING OF TEACHERS FOR SECONDARY SCHOOLS

EDWIN G. DEXTER, PROFESSOR OF EDUCATION, UNIVERSITY OF ILLINOIS

The task assigned to me in the preparation of this general report is one with easily defined limits. It is a study of fact pure and simple, entirely free from speculation with intent to discover the facilities for pedagogical instruction within the colleges and universities of our country. If we are to accept the rapidly growing feeling that these are the only educational institutions adequately equipped in their academic and scientific departments for the preparation of teachers for secondary schools, the study is one of the professional preparation of these teachers.

The sources of information are threefold:

1. Recent reports of the United States Commissioner of Education.
2. College and university catalogs as well as special reports of all sorts from those institutions.
3. A considerable mass of correspondence with various college officers, mostly professors of education.

From the study of the first of these sources of information it was found that 219 colleges and universities reported (*Rep.*, 1904) students enrolled in courses in pedagogy. The merest inspection of the list convinces one of its inexactness since several having successful departments of education are not included. Such institutions are, however, included within the study. On the other hand, a careful study of the catalogs of the institutions named in the commissioner's report discloses the fact that 21 of the number make no mention

of any pedagogical offerings. An attempt was made, thru correspondence when necessary, to secure the catalogs of all the 219 institutions mentioned, tho without success in 50 instances.

Of the 169 institutions whose catalogs were studied a limited number (16) offered so-called "teachers' courses" in specific subjects, as Latin, English, or mathematics, which were plainly but rapid reviews, useful as "cramming" courses for teachers' examinations; but since no offerings were made along strictly pedagogical lines, these were omitted from the study. A few institutions mentioned by the Commissioner are special schools for the deaf or blind and were excluded as plainly beyond the scope of this paper.

With such substraction and with the addition of institutions known to offer courses in pedagogy, but not mentioned in the list, we have as the basis of this report 148 colleges and universities of widely varying educational merit and elaboration of organization.

A considerable number of these institutions, altho classed by the Commissioner as "higher," offer academic and scientific courses scarcely higher in grade than those of the sophomore year of the better universities and perhaps theoretically should be excluded from this study. Practically, however, they must be included since they are the sources of supply for the teaching force of the secondary schools tributary to them.

In the statistical study of these institutions immediately following, made for the purpose of showing in a general way the facilities for pedagogical instruction, the following facts are presented:

1. Number of instructors of professional rank offering pedagogical courses.
2. Number of instructors of lesser rank offering such courses.
3. Number of instructors of both these classes who are also officially connected with other departments of instruction.
4. Total number of pedagogical courses offered.
5. A rough classification of such courses. (a) Courses in educational philosophy. (b) History of education. (c) Administration and method. (d) Educational psychology (where these courses are not offered in the department of education or pedagogy but by a separate psychological faculty they are not included). (e) Observation and practice teaching. (f) Seminars. (g) School hygiene. (h) School law.

By the term "course" is meant the offering of a single subject for one term. For the purpose of this study it was deemed inadvisable to take into consideration, either the varying lengths of courses (usually either two or three to the college year) or the varying number of exercises per week. To have done so would, in some ways, have increased its value but only at the cost of very greatly increased complication.

The question of classification of subjects under a reasonable number of heads was not an easy one to settle. More than one hundred different statements of courses were found. Whether the classification I have used is the best possible I should not wish to say. I am, however, stating it with sufficient detail to make it full y understood:

Class A: All courses of a general philosophical nature. These are frequently under the title "Philosophy of Education." Courses entitled "Principles of Education" are also included when from the description it is plain that the emphasis is on the philosophical side; "Educational Classics" when the emphasis is not on the historical side. Courses in the philosophy of particular educators, as Herbart, Rousseau, Froebel, etc.

Class B: All general courses in the history of education. All special studies of the schools of particular periods or countries except those in present organization and methods. Educational classics when the emphasis is historical.

Class C: A very wide range of courses is covered by this group. Roughly, they may be divided into two divisions: (1) courses in organization and administration; (2) courses in methods of teaching, either general or in the teaching of particular subjects. Under the first division are the following: School organization, general pedagogy (not theoretical), school administration, the present organization of foreign school systems, etc. Under the second division comes general method and all courses in the teaching of special subjects, as Latin, mathematics, etc. These courses are frequently offered by instructors in other departments than that of education.

Class D: No courses in psychology were included which had not plainly a pedagogical application. Among those covered are the following: Educational psychology, genetic psychology, child-study.

Class E: These courses are fully discussed later in this report.

Class F: This group of courses were plainly for advanced students. Educational philosophy, history, and administration are included tho the latter predominates. The titles of the other two divisions are sufficiently expressive and need no explanation.

In the tabulation of data everything is excluded which applies specifically to the work of the elementary schools. Whatever applies to school in general or to secondary schools is retained. The University of Chicago and Columbia University offer many courses in elementary-school training, and many of the smaller colleges offer some work that must be excluded for the same reason. Such subjects as manual training, music, drawing, household science, physical education are not included because adequate data are obtainable from very few institutions.

The facts disclosed by the study of the 148 colleges and universities are as follows: Within them 357 different instructors offer courses of a pedagogical character. Of that number of instructors 278 are of professional rank. That so large a number are of this rank is due to the fact that within the smaller institutions, which predominate in the list, there are but comparatively few officers of a lower grade.

Of the entire number of instructors (357) 278 are officially connected with other departments in which they also give instruction. This fact is also largely due to conditions in the smaller institutions in which the pedagogical instruction is frequently given by the professor of philosophy. The custom too, even in the larger institutions, of having the courses in special methods given by instructors in the academic and scientific departments, is of influence here.

The total number of courses of the nature covered by the classification already given was found to be 935. The classification of these courses is as follows:

	Schools	Courses	Per Cent. of Total Number of Courses
Class A (philosophical)	37	74	8
Class B (historical)	123	196	21.2
Class C (organization and method)	148	469	50.7
Class D (psychological)	47	93	9.8
Class E (observation and practice) in 36 schools.			
Class F (seminars)	27	70	7.6
Class G (school hygiene)	15	20	2.2
Class H (school law)	13	13	1.4

The exact nature of the work done in the particular subjects covered by this classification it is not easy to determine, either by the printed catalogs or correspondence. In the smaller institutions it is almost entirely thru the use of the textbook, and in the larger ones mainly so. In the former the single course offered is usually designated as "pedagogy" or "school management." The number of institutions offering courses in class A is largely augmented by a requirement of the Kansas law to the effect that all candidates for the teacher's certificate must be proficient in the philosophy of education. That being the case, all of the colleges of the state offer that subject. For class E (observation and practice) it was impossible to determine even the number of courses offered since the work is so often done in connection with other definite offerings.

The following institutions, however, profess to offer some facilities for the work. Just what is done in some of these institutions is shown later in this report.

Berea College	University of Nashville
Brown University	University of Nevada
Bethany College (Kan.)	Ohio State University
University of Colorado	University of Rochester
Columbia University	Roger Williams University
University of Chicago	Syracuse University
Cornell College	Throop Polytechnic Institute
Drake University	Union College (Neb.)
Fisk University	University of Utah
Howard University	University of Washington
University of Idaho	University of Wisconsin
University of Illinois	West Virginia University
Iowa Wesleyan University	Western Reserve University
Knox College	New York University
Kentucky State College	Dartmouth College
University of Missouri	Harvard University
University of Nebraska	Nebraska Wesleyan University

The following table shows with some detail the conditions of pedagogical instruction for a selected list of colleges and universities taken from the larger list of 148. Only those institutions were included for which conditions could be fairly well determined. Any inaccuracies may be ascribed to the difficulty of classifying the offerings.

TABLE I

Schools	Total Number Instructors in Education	Professors	Instructors, Assistant and Associate Professors	No. of Professors Who Offer Courses in Other Dep'ts	Total Number of Courses Offered	Philosophy of Education	History of Education	Administration Method, Management, Pedagogy	Educational Psychology, Child-Study	Seminars in Education	School Hygiene	School Law	Observation and Practice	Elementary Schools, Manual Training
Harvard University.....	2	1	1	..	6	1	2	3	..	..	..	..	yes	..
University of Illinois.....	19	13	6	16	35	2	4	21	..	6	1	1	yes	6
University of Michigan.....	14	14	..	11	23	3	2	15	1	2	..	..	..	..
University of Missouri.....	11	8	3	9	26	..	6	17	3	..	..	..	yes	8
University of Iowa.....	6	3	3	2	19	2	4	8	1	4	..	..	no	..
New York University.....	5	..	..	..	12	1	2	5	2	2	..	..	..	4
University of Chicago.....	21	9	12	18	48	4	7	27	3	2	2	..	yes	42
Columbia University.....	24	20	4	17	92	7	8	55	8	12	2	..	yes	44
University of Washington.....	1	1	..	..	7	1	1	4	1	..	..	..	yes	..
University of Nebraska.....	12	6	6	9	29	2	4	15	4	3	1	..	yes	7
University of California.....	11	3	8	8	28	1	6	13	4	3	1	..	yes	1
University of Colorado.....	4	3	1	..	10	..	2	5	1	2	..	..	no	..
Leland Stanford Jr. Univ.....	9	3	6	6	16	1	2	10	..	2	1	..	yes	..
University of Rochester.....	2	2	..	2	2	..	1	1	..	..	..	..	yes	..
Dartmouth College.....	2	1	1	2	3	..	1	1	1	..	..	..	yes	..
University of Wisconsin.....	6	3	3	5	14	2	3	5	3	1	..	..	yes	4
Indiana University.....	3	3	..	3	6	..	1	3	1	1	..	..	no	..
Ohio State University.....	7	5	2	5	16	..	3	8	2	1	..	..	no	..
West Virginia University.....	8	4	1	..	15	1	4	4	1	5	..	..	yes	..
University of Texas.....	4	2	2	1	10	1	1	4	3	1	..	..	no	..
Brown University.....	1	1	..	..	15	..	2	8	1	3	1	..	yes	..
University of Minnesota.....	32	25	7	29	22	1	3	15	1	..	..	..	..	..

OBSERVATION AND PRACTICE TEACHING

The normal schools of the country have, from their inception, been centered very largely in the practice school. On the other hand, university departments of education have developed the instructional and theoretical sides first and are only just now beginning to give adequate attention to the practice school. It is probably truer than many of us would wish to acknowledge that it is as yet largely on paper. The following pages, setting forth with some detail the observation and practice facilities in a considerable number of institutions, were taken, in some part, from their printed announcements but more largely from correspondence with officers of the various departments of education.

The University of California and Leland Stanford Jr. University are required by state law to give training in observation and practice to matriculants for the state certificate; "at least one-third of the prescribed work in education shall consist of actual teaching in a well-equipped training-school of secondary grade directed by the department of education." This law went into effect June, 1906.

The University of California has been doing this for some years, using the city schools as a medium. So far the work has been chiefly in the grades. The university will soon maintain a high school of its own. Temporarily the Leland Stanford Jr. University will arrange for practice work in the San José Normal School.

Brown University possesses excellent facilities for the practical training of

teachers thru an arrangement with the school authorities of the city of Providence. Practice teaching is done under the supervision of the director of the training-department of the Providence High Schools, who is also the professor of the theory and practice of education at Brown University. The director confers with the principals of the high schools and the supervising teacher as to the arrangement of hours and classes assigned to the student teachers. He visits these classes frequently and confers with the principal in cases of discipline arising in connection with the work of student teachers.

The director nominates supervising teachers from the regular teachers employed in the high schools. The nominations must be approved by the committee on high schools in order to become valid. The university pays each supervising teacher fifty dollars for each student teacher of the first type assigned to such supervisor for full time. Any supervising teacher is entitled to free instruction at Brown University, tho the courses taken may not count toward a degree unless tuition is paid.

Students who wish to be enrolled as student teachers must hold the degree of Bachelor of Arts or the degree of Bachelor of Pedagogy from some reputable institution. They must be satisfactory to the superintendent of public schools and to the professor of education of Brown University. They must take certain prescribed courses in education at Brown University and such courses may count toward the Master's degree. Those who complete their work in the schools and in the college receive a teacher's diploma from the university. Weakness in discipline or in scholarship is sufficient cause for withholding the diploma.

Each year the committee on high schools appoints at least six student teachers (usually three of each sex), from a list of candidates who have fulfilled the requirements for student teachers in general. These students are termed student teachers of the first class. The city pays them four hundred dollars a year for their services and they are subject to the same regulations as the regular teachers except as to the amount of work they are required to do. Their work is arranged in accordance with the plan adopted by the committee on high schools.

Student teachers of the second class serve without compensation. They must do at least one hundred and twenty-five hours' observation and individual instruction under the supervision of competent teachers. The plan of their work is determined by the superintendent of public schools and the professor of education. The university requirements are the same as for student teachers of the first class. When they have received the teacher's diploma they have the same status before the committee on high schools as if they had been student teachers of the first type. In the appointment of regular teachers of the first grade, preference is given to those who have completed this course of training.

The University of Wisconsin offers no specific work in practice teaching

tho the department of German makes some provision for such work in connection with the elementary classes in that language.

At Dartmouth College the professor of education and the graduate students in education spend one week each year visiting the high schools of Boston. Students are also urged to visit the local high school. A number of students are employed as substitute teachers in the Hanover schools and a number assist in different college courses. Such work is carried on in connection with the graduate courses which such students are pursuing.

The University of Rochester does not attempt to give opportunity for practice teaching, tho the students in one of the Latin courses occasionally conduct the recitation of the class. Most of the students who intend to teach are given positions in the city evening schools, where they work under expert supervision. Some of the work in the evening schools is superintended by instructors from the university. The university furnishes substitute teachers for the day high schools.

At Harvard University all students in course "Education 3" must visit schools regularly the first half-year and they must make weekly reports of these visits. The reports are written and are at first made to cover a wide range; later they must cover the field of work of special interest to the individual student. During the first half-year the students visit and report on the work in every grade from the primary school thru the high school. During the second half-year the inexperienced students of the course teach for practice in the upper grammar grades and in the high schools of Cambridge, Newton, Brookline, and Medford; each student, teaching continuously some one class or section in some one subject for the half-year, being entirely responsible for the class or section of which he has charge, just as if he were the regular teacher. All the work in observation and practice is in the direct charge of one of the instructors in education from Harvard University. He discusses with the students their work, giving aid in outlining the lessons the students are to present.

The experienced students visit schools thruout the year, giving special attention to administration and organization the second half of the year. This course is open only to seniors and graduate students. The university offers one free course to one teacher for each student teaching in a given school up to the number of ten courses in any one year.

During one term (twelve weeks) an opportunity is given the students in education at West Virginia University to observe the high-school work of the Morgantown schools. About twelve or fifteen exercises are observed. For students who have taken a number of courses in education, there is a seminar or practicum which meets twice a week for twenty-four weeks. Each student presents at least six lessons in the city schools, being informed some days in advance just what lesson is to be presented in a given subject. One student prepares a lesson plan and presents it for criticism. Each member of the seminar also prepares a tentative plan of the same lesson, the entire class being

present when the lesson is presented. After the presentation of the lesson the instructor holds a conference of students for the purpose of criticism.

In 1904 the University of Missouri established the Teachers College High School which now enrolls about one hundred students. Nearly all the teaching is done by senior students of the Teachers College, who receive credit for their teaching the same as for any regular university subject. Students who are to receive the teacher's certificate must do practice teaching (from two to nine hours' credit) one semester. The practice work is under the direct supervision of the professor of theory and practice of teaching, who is also superintendent of the Teachers College High School, assisted by the heads of departments of the Teachers College. The high school is under the immediate direction of a principal, the girls being in charge of a lady assistant.

The University of Ohio conducts no courses in observation but some instructors arrange for such work in the city high schools.

The University of Washington has no practice school but students who intend to teach are requested to do a semester's work in observation and practice in the Seattle public schools. One of the university courses which deals with secondary school curriculum requires students to devote one afternoon each week to observation in the city schools, under the direction of the professor of education. In connection with a course in supervision, students visit local schools to study the problems of organization and management.

The University of Chicago maintains a secondary school. The teachers are experts and students have an opportunity to study the workings of the school and the methods of instruction. The announcements of the university state that practice teaching is required in certain courses in mathematics; however, no information could be obtained as to where or how the work is done.

At the University of Colorado observation and practice teaching are carried on in the city schools and in the state preparatory school. The work in the city schools is in charge of the professor of education. The general direction of the observation and practice teaching is left to the head master of the preparatory school.

Observation and practice teaching at the University of Nebraska.

EXTRACTS FROM

The Professional Training of Teachers. Macmillan. G. W. A. Luckey,
Professor of Education, University of Nebraska.

By an arrangement with the public-school authorities of Lincoln, the university students are given opportunity for observation and practice under direct supervision, covering both elementary and high-school grades. In order to obtain this privilege the student must have reached the rank of senior and be within one year of the requirements for the university teacher's certificate.

Students are required to take certain courses in education.

Partly for their convenience and partly on account of their strength, the students are divided into two classes, cadets and student teachers. The former give attention only to

observation of the regular schoolwork and to the assisting of the regular teacher in the classwork; the latter, in addition to the work of cadets, are called upon as substitutes, or supply teachers, to fill temporary vacancies. Cadets receive no pay, but student teachers, when supplying, receive pay at about one-half the usual salary. There are fifteen public-school buildings in the city, to each of which may be assigned one or more cadets or student teachers, depending upon the size of the building and the number of students registering for practice-work. Students visit the building to which they are assigned at last twice a week, spending two hours on each visit. They report to the principal for duty and are sent by her to one of the rooms, where they make themselves useful by assisting the teacher in the seat and classwork of the pupils, in distributing material, etc. In this way they become familiar with the general plan of the schoolwork, with the names of most of the pupils; so that, when later they are called upon to supply temporarily the place of any teacher in the building to which they have been assigned, they feel at home, and the pupils look upon and respect them as regular employees or teachers.

When two or more students are assigned to the same building, they arrange to have their visits come at different hours. The position of student teacher calls for more responsibility than that of the cadet, since the former may be called upon at any time to supply in the building to which he has been assigned, tho the supply-work of any student teacher will probably not exceed ten days per year.

The city superintendent of schools is a university lecturer on school supervision and he has the practical direction of cadets and student teachers.

A limited number of advanced students who are carrying fewer hours of university work are employed as regular assistants and readers in the high school. They give daily service and receive pay for the same at the rate of twenty-five cents per hour.

At Columbia University two practice and observation schools are maintained. In one of these opportunity for practice teaching is given. The other charges a high rate of tuition and the work is in charge of expert teachers. In the school first mentioned all work is in charge of special teachers who supervise the work of the student teachers. The second school affords opportunity for observation.

The English department requires twenty-four hours of English as a prerequisite to admission to the training-course. Students who have never taught are required to teach two or three weeks. This work is carefully prepared for and carefully supervised. All students are required to make a study of the work in the Horace Mann School; to make accurate and detailed reports of what they have seen, and to participate in critical reports of what they have seen, and in critical discussions on this work. The great need of the department is more time for practice. (Professor Baker thinks that, instead of one or two weeks, at least a month of such teaching should be required of each inexperienced teacher.)

The department of mathematics has a two-hour course in observation and practice. About one-sixth of the time is allotted to observing the teaching in certain classes, and five hours to general observation in the Horace Mann School. The rest of the time is devoted to teaching. All work is under the general control of the head of the department, who visits the classes as opportunity permits, and it is under the immediate supervision of an adviser of experience who meets daily each student who is observing or practicing.

The department of Latin follows two methods in the training of teachers. A certain amount of time, equivalent to about six weeks, one period per day, is devoted to observation in the various classes under the guidance of the teachers; they observe and report on the work that is done, and sometimes lay out the plans of lessons for the following day, which they can criticize in the light of the actual lesson. Finally, the students are given a certain amount of actual teaching. So far each student has been able to have but one or two weeks of actual practice in teaching. In the department of geology no attempt at practice teaching is made.

Students who expect to teach physiography in secondary schools do observation work. They also assist instructors in preparing laboratory materials and devising laboratory exercises and in an instance to individuals in group laboratory work.

At the University of Illinois, the Academy (situated upon the campus) and the city schools of Champaign and Urbana are utilized for observation and practice purposes. A two-hour course in observation is open to juniors and a three-hour course in practice is open to seniors. In the former, students are assigned particular courses, largely in the academy which they visit regularly for from four to six weeks, carefully noting the work done and having weekly conferences with the regular instructor and a member of the department of education of the university who is in charge of the practice-work. Students in the practice course teach regularly for some weeks a class assigned them in some one of the schools.

CERTIFICATES

A number of institutions offer a teacher's certificate upon the completion of a certain number of hours' work in specified departments. The University of Michigan appears to have been the leader in this movement and nearly all the courses leading to this type of diploma are similar to the requirements for the teacher's diploma of the University of Michigan.

In general, certificates are based upon three sets of requirements, viz.:

- a) Special knowledge in the subject or group of subjects the candidate wishes to teach.
- b) Professional knowledge. This includes courses in pedagogy and education, and usually psychology and logic.
- c) General knowledge of science, mathematics, English, foreign languages, history, etc. This requirement is intended to secure as broad culture as possible.

These three groups of requirements will probably cover the demands made by all the institutions which grant such certificates of qualification to teachers in secondary schools. The courses differ in the amount of work required in the different groups. In several states the university certificate is honored as a teaching certificate and, after the holder has taught a certain length of time, the state superintendent of public instruction issues a permanent certificate to teach. Below are given extracts from the regulations of several universities which grant diplomas. No attempt is made to study the requirements of the many small colleges which offer certificates. Their

certificates are usually given to undergraduates, while the certificates here studied are issued at graduation or to graduate students.

University of Wisconsin: Special, major subject; general, same as for regular course leading to degree; professional, ten hours. A law enacted by the legislature of 1901 states:

"A diploma granted upon the completion of a regular collegiate course of the University of Wisconsin, if accompanied by a certificate that the bearer has completed the course of pedagogical instruction prescribed by the university for all persons who intend to teach . . . upon presentation to the state superintendent shall entitle the holder to receive from that officer a certificate which shall authorize him to teach in any public school for one year."

Section 458 *b* and *d* of the *Revised Statutes* provides that after one year of successful teaching the diploma of a graduate of the university may be countersigned by the state superintendent, and that when so countersigned the diploma shall have the force and effect given by law to the unlimited state certificate, and may be honored as a teaching certificate.

University of Nebraska: Special, twenty hours (varies); general, qualifications for B.S. or B.A. degree; professional, eighteen hours.

The university teacher's certificate is granted to graduates of the university who have satisfactorily completed the work outlined below and have shown marked proficiency therein.

"The professional work required for the teacher's certificate may be elected by regular students above sophomore standing, by experienced teachers, and by unclassified students who satisfy the heads of departments that they are qualified to pursue the work.

"Under section ten of the school law of Nebraska, as amended in 1897, the state superintendent of public instruction is authorized to grant permanent state teachers' certificates after three years' successful experience in teaching. The certificates are also recognized by the authorities in a number of other states as sufficient evidence upon which to grant teachers' licenses without examination." They may be honored as a teaching certificate.

University of Missouri: Special, same as for major subject; general, regular requirement for graduation; professional, twenty-four hours. Gives right to teach. Life-certificate to teach in high schools. Same general requirements as for the degree of Bachelor of Science. As part of the twenty-four hours in education, the following courses must be included: 1*b*, or 2, 5*a*, 19*a* or 19*b*, and at least one special course on the teaching of some subject of high-school instruction. As part of the academic work, the candidate must elect at least eighteen hours in each subject which he expects to teach.

University of Illinois: Special, major subject; general, graduation; professional, fourteen hours. Does not give right to teach.

The School of Education grants no degree, power to recommend such residing in the particular college in which the student is registered. It has, however, the power to recommend the granting of a special certificate, the university certificate of qualification to teach. Upon this will be stated the major or majors of the recipient, whether definite subjects or instruction, special subjects for supervision or general supervision. All candidates for the teacher's certificate must take the following courses: elementary psychology (psychology 1 or 2, 3 hours); principles of education (education 1, 5 hours); high-school organization and administration (education 6, 3 hours), and three hours of work selected from the offerings of the department of philosophy.

University of California: Special, twenty hours; general, graduation, four groups; professional, twelve hours.

Special knowledge, twenty units, normally, in the subject or group of closely allied subjects that the candidate expects to teach, the ultimate decision as to the candidate's proficiency resting with the heads of the departments concerned. (In some departments more than twenty units are necessary.)

General knowledge, courses sufficient to represent (with the inclusion of special studies) four groups from the following list: Natural sciences, mathematics, English, foreign languages, history, philosophy. This requirement is intended to secure, so far as is possible, breadth of culture and sympathy with the various lines of high-school work.

For teacher's certificate the requirements are the same as for group elective, except that in the fifteen units of advanced courses candidates must include 11*a*, either 14*c* or one part of 23, and one other course from the list 11 to 14. If, however, they are combining advanced studies in economics, politics, history, or jurisprudence with English for their groups, they may substitute for this requirement of three philological courses, any one course from 11*a* to 14*e* and two in debating (7*a* to 7*c*). Courses 9, 10, 11 to 14, 17, 18, 21, 23, and the graduate courses are especially adapted to the needs of students who desire to teach.

Beginning with December, 1905, a final examination will be required of candidates for the teacher's certificate in English. The emphasis will be laid, not so much on detailed information as (a) on grasp of the subject of English in its twofold aspect—the language and literature, and (b) on scholarly methods and workmanship. The candidates will be expected to satisfy the department of English that they have: 1. A scholarly acquaintance with each of the three main periods of the English language and with the history of the development to the present time; 2. Familiarity, obtained at first hand, with the chief masterpieces of English literature, with the history of its development, and with the principles and methods of historical study; 3. Satisfactory special knowledge of one of the greater authors or of one of the main literary movements; 4. Training in the principles and methods of poetry and prose requisite to the advanced study of literature; 5. Skill in organizing and presenting thought, orally and in writing. Candidates are warned against supposing that the purpose of the examination can be attained by mere accumulation of courses in English. It will always be presupposed, however, that candidates presenting themselves for examination have an equivalent of twenty-seven units of English to their credit.

Teachers' certificates. The department will, in general, recommend, as qualified to teach mathematics in high schools, only such graduates as have passed with credit in courses 2, 4, 5, 6, 9, 11, 12*a*, 12*b*, 13, 18. It is also of great importance that the prospective teacher of mathematics should be well informed on the relation of mathematics to other sciences, and he should to that end devote a considerable portion of his time to at least one of the closely related sciences. The department further reserves the right to exact a practical test of the candidate's ability to present a clear and interesting exposition of subjects taught in the high schools. For those preparing to become teachers and investigators, the individual aims of the student will determine, after the fundamental courses have been taken, what advanced courses should be selected. The minimum for the teachers' recommendation is 1 (lectures only), 2, 3, either 4, 5, and 7 and 17.

Students who desire the teacher's certificate should do not less than eighteen units of group elective work in German, including courses 6*a*, 6*b*, 7*a*, 12, 18*a*, and 18*b*. The recommendation for the certificate is not, however, given in course, but only for high scholarship and general proficiency in German, as judged by the department. Applicants for this certificate will be required to take, in addition to the elementary courses, at least ten hours of junior and eight hours of senior work, but the formal compliance with this requirement does not necessarily entitle the applicant to the certificate; and in any case a fair speaking knowledge will be a requisite. Twenty-four units of physics will be required for the teacher's recommendation. Applicants for the recommendation in physics, in making up this number of units, must include in their work the equivalent of courses 1 and 3, with either course 4 or 2*a*. See statements under these headings, and under course 18. In all cases proposed combinations of courses should be submitted for approval to the professor of physics. The requirements for recommendation by the department are (a) 12 units of advanced work in Latin; (b) course 4; (c) Greek, course A (or its equivalent), but until May, 1907, a reading knowledge of French may be substituted; (d) a reading knowledge

of German; (e) an acquaintance with Roman political history; (f) the distribution of the 12 units of advanced work in such a way as to show acquaintance with ante-classical and imperial Latin, and with poetry as well as prose. Students will be recommended for teachers' certificates who, at graduation, or after, shall have completed with credit course 6 in addition to twenty-one units of university work in Greek. Graduate students will be recommended on proof of having creditably completed work equivalent to that required of undergraduates. Training-course for students intending to become teachers of chemistry, 4 hours, throughout the year; 1 hour lecture, 1 period (3 hours) assisting in laboratory instruction, and 2 periods (6 hours) of laboratory work. The instruction will be participated in by all the department instructors. Prerequisites: Courses 5a or 5b, 8. Courses 1, 2, 3, 4, 5a, 8, and 28 are prerequisite for a teacher's recommendation in chemistry.

A discussion of the teaching of history in secondary schools, with special emphasis on the methods and materials. The course is designed for seniors and graduates expecting to apply for a high-school teacher's certificate in history: Two hours, either half-year, Tuesdays, 3. Prerequisite: Courses 52, 54, 64, 63, and 73, and political science 1.

The department of history will recommend for high-school teachers' certificates only such students as have completed at least six units of each of the following six subjects: government, ancient history, mediaeval history, modern European history, English history, and American history. Those desiring teachers' certificates are advised to take courses 4, 5, and 9, with the prerequisites, but should consult with the head of the department early in their course. Lecture courses in summer session are equivalent to course 1 in part and credit will not be imposed each half-year for each laboratory course. This rule applies to courses 2, 3, 5, 6, 7, 9, 11, 12, 13, 14.

University of Texas: Special, major subject (eighteen hours); general, graduation; professional, ten hours (3½ courses), permanent teaching certificate; 2 years state: 2 courses in education and 3 other full courses; 4 years state: 3 full courses in education and 3 other full courses, 3 in education and diploma. Diplomas conferred by the board of regents upon academic graduates completing courses 1, 2, 3, 4, and one other full course or its equivalent in the School of Education. Corresponds to teacher's certificate of other universities. Teachers' course, a review of preparatory Latin authors and prose composition. Courses 3 and 4, at least, are prerequisite. Teachers' course in botanical method: This course will involve discussions of the botanical content or subject-matter of nature-studies for the grades, elementary agriculture for rural schools, and the more substantial course in botany for high schools; a short review of the fundamental relations of the science to a rational teaching method; consideration of the technical details of high-school laboratory work. Prerequisites, botany 1, or its equivalent, and where credit is desired in the School of Education, courses 1, 2, 3, and 4 in that school. The teaching of elementary mathematics: This course is intended for those wishing to become teachers of mathematics. There will be a discussion of the underlying principles and fundamental concepts of the subject showing the bearing of such principles and concepts on correct methods of teaching. A practical application of these discussions will be made to public-school work. It is hoped that this course will be of benefit to prospective teachers and superintendents. Special attention will be given to the teaching of mathematics in secondary schools. This course will be open to those who have had mathematics 1 or mathematics 2.

University of Michigan: Special, major subject; general, graduation; professional, eleven hours. By authority of an act of the state legislature, passed in 1891, the faculty of this department gives a teacher's certificate to any person who takes a Bachelor's, Master's, or Doctor's degree, and also receives a teacher's diploma as provided above. By the terms of the act, the certificate given by the faculty shall serve as a legal certificate or qualification to teach in any of the schools of this State, when a copy thereof shall have been filed or recorded in the office of the legal examining officer or officers of the county, township, city, or district.

University of Iowa: Special, major subject; general, graduation; professional, eighteen

hours. May be honored as a teaching certificate. Students who have completed the following work and who have met the other requirements stated shall be awarded a teacher's certificate in education: 1. Twelve semester hours in education, including the courses in principles of education and in child-study. 2. Six semester hours in psychology. 3. All other requirements for the degree of Bachelor of Arts in the college of liberal arts in this university. 4. The recommendation by the department of education and the vote of the faculty upon the basis of superior work, apparent aptitude for teaching, and the fulfilment of other requirements.¹

University of Kansas, 1903-4, p. 82, teacher's diploma: The teacher's diploma of the university may be given to A.B., A.M. and Ph.D. graduates of the university on the following conditions: The completion of at least four years of college-work in the subject, or the closely allied subjects, that the candidate proposes to teach; the ultimate decision as to the candidate's proficiency to rest with the head of the department in which the major work is taken. The completion of two and one-half terms' work in the department of education. The candidate for the A.B. degree, who is at the same time a candidate for the teacher's diploma, shall be required to offer twenty-five terms (about 125 semester hours) of undergraduate work. The teacher's diploma shall be granted only to graduates whose scholarship in the twenty-five terms' work offered for the degree and the diploma averages as high as grade 11. On presentation of the university teacher's diploma the state board of education will issue a three-year state teacher's certificate. At the expiration of the three-year certificate a life-certificate will be issued, if the candidate has taught successfully during two of the three years. No observation or practice teaching.

Cornell University: A state certificate upon graduation good for three years, and renewable for life without examination, is granted to those who successfully complete a course in the science and art of education.

The university prescribed work is as follows: 1 psychology, general and educational, 90 hours; 2, method in teaching, 60 hours; 3, history and principles of education, 90 hours; 4, observation, 20 hours.

Students who do not complete the foregoing may receive a temporary certificate upon graduation good for two years, but renewable only upon state examinations in professional subjects constituting a full equivalent for the university courses required in the first alternative. The subjects for this examination are as follows: psychology, general and educational; history and principles of education; method in teaching.

University of Chicago (The College of Education): A diploma is granted after two years' work, but the regular course of preparation covers four years. As a prerequisite, 3 units of English, 2½ units of mathematics, 3 units of foreign languages are prescribed for admission to the college. The remaining 6½ units for entrance may be selected from the rest of the official list. Thirty-six majors (4 years' work) are required for graduation. The prescribed work of the first two years is philosophy, 1 major; psychology, 1 major; English, 2 majors; mathematics or science, 2 majors; electives, 6 majors; work in some special department, 6 majors. The work of the last two years (senior college) requires 18 majors.

ACADEMIC PREPARATION

There is a great difference of opinion among instructors as to the exact amount of work a student should do in any particular before he may be recommended as teacher of that subject. Institutions which grant teachers' diplomas have definite requirements. Sometimes the requirement is uniform. More frequently there is some variation in the number of hours required in different

¹ This certificate may also be awarded to graduate students who complete the work in education and in psychology and who receive the recommendation of the department of education and the vote of the faculty.

subjects. Frequently a minimum number of hours is required but provision is made for the including of related subjects with the major subject. Some institutions have no set standard of recommendation, the matter being left entirely to the discretion of the individual instructors. The number of hours in the special subject is left to the instructor but not more than twenty-five hours may be required in one subject.

At Brown University recommendation is largely a personal matter with the instructor and is not an act of the university.

At Harvard the same plan is followed. In chemistry two courses are required, but two more should be taken. In history about five courses in history and government might suffice. In mathematics three courses are required and, in addition to them, there should be an additional course in mathematics, or in physics above freshman grade. However, recommendations are sometimes made even if the candidates have not met the full requirement.

In French four years' work entitles to only a moderate testimonial. For a recommendation without reserve the candidate should have not only four full courses, but also one or two higher courses in the literature and should have good pronunciation.

In the department of zoölogy two courses are required, but most students expecting to teach the subject take much more. The English department seldom gives recommendations as a body, this being considered an individual matter with the instructors. The instructor uses his discretion in recommending candidates, basing his recommendation upon his personal knowledge of their ability. Latin and Greek have no very definite requirements but they must be pursued at least thru the sophomore year and the student must be familiar with Greek and Latin composition. Including the work the student has had in the preparatory school, this standard means about six years of Latin and from three to five years of Greek. The teachers of Latin must be well up in Greek.

The department of geology does not prepare many men for high-school work. Altho there is no definite standard, four courses would probably be sufficient to secure recommendation. The department of German requires three full years of work.

At the University of Wisconsin the department of history requires thirty hours; mathematics thirty-six; English forty; Latin twenty-six; and physics twenty-two hours. In some of the departments it is thought that more work should be taken if the student wishes to specialize.

Dartmouth College has no definite system of recommendation but it is probably safe to say that the scientific departments will want a man to have all the elementary courses and one or two advanced courses in his chosen subject, before he may be recommended as prepared to teach in a secondary school.

The University of Texas requires eighteen hours' work for the major sub-

jects, but the heads of some departments demand more work from subjects who expect to teach. In botany thirty hours (five courses) is recommended, tho twelve hours might be sufficient for the student who will teach botany as a minor subject. The English department asks for six hours of higher work besides the eighteen hours nominally required.

The language departments demand more work, German and Latin each asking for thirty hours. Greek should be accompanied by an extensive course in Latin. Mathematics requires about twenty-four hours, while in physics only sixteen hours are required. Physiography and zoölogy demand only eighteen hours.

At the University of Rochester thirty hours or one-sixth of the work required for a degree is the minimum preparation for the teacher of a special subject in the high school. Of this work in the special subject from five to fifteen hours are required, the other courses in the subject or group of subjects being elective. The university has no specific regulation as to the recommendation of its candidates but the plan mentioned represents very closely the standard applied to judging the fitness of a student for high-school work.

At Indiana University the major-subject requirement usually represents the amount of training that is the basis for recommendation to teach in good high schools. The major subject requires forty-five hours in the departments of Latin, English, history, physics, mathematics, and botany. In modern language the requirement is sixty hours. Besides the regular requirement in a subject the department may control twenty hours, in work closely related to the major subject. By permission a student may do more work than the forty-five hours required in the special subject. Students (special) who are specializing in certain subjects will usually receive preference in recommendation as teachers of those subjects. Students who do not graduate may receive a statement of the amount of work they have done in any department. Where a teacher is required who can teach several subjects the student is required to major in but one subject. Two years' work would be sufficient in any subject the candidate might be expected to teach, with the exception of modern language not studied before entering college.

West Virginia University requires thirty hours of English, twenty hours of history, and ten hours of physics. In Latin the student should, at the very least, have read all of Caesar's *Gallic War*, eight of Cicero's shorter orations, besides his letters *De Amicitia* and *De Senectute*; Virgil's *Aeneid*, together with the *Eclogues* and *Georgics*; the *Odes* and *Epodes* of Horace, and one book of Livy's *History of Rome*. No one charge should attempt to teach Latin until he has enough Greek to read the *Anabasis*, the *Iliad*, and the *Odyssey*.

There is a difference in opinion among the instructors of Ohio State University as to the exact amount of work that should be required of a student who intends to teach a certain subject. About thirty hours (22 U. of I.) or one-sixth of the total amount of work required for graduation will probably

represent an average of the requirements. Some instructors require students to take teachers' courses in the subjects they expect to teach.

The State University of Washington adapts its requirements to the grade of high school needing teachers. There are about seven high schools of the first class in the state. For recommendation to teach in this group the student must make the special subject he is to teach his major. To teach in schools of the second class he must also have about two years' work in any other subject he may be required to teach. To teach in schools of the third group, college preparation is required in two or three subjects but no definite standard is set.

The University of Colorado requires thirty hours' work, but this need not all be absolutely in one course or department; it may be in closely allied departments. Teachers of English and of foreign languages must have twenty-five hours' credit.

The School of Pedagogy of New York University prepares mainly for the work of the elementary schools. The institution has no definite requirement as to the amount of work a student must do to receive recommendation for a position as teacher in secondary schools.

At Columbia University the prerequisite for admission to secondary training in English is twenty-four hours in English. This work must include courses in composition and in literature. The literature studies must have included both the historical and critical phases.

The student must take six hours' work in the professional course which includes a study of the subject-matter from the teacher's point of view and a study of teaching. The student must also take the prescribed work in observation and practice teaching.

The minimum requirement for mathematics is eighteen hours but the best students usually exceed this amount. Many take from sixteen to twenty hours more than the amount required. The university requires six hours' work in the professional or training-courses. A graduate training-course of four hours may be taken.

A teacher of Latin should have a fairly complete and accurate reading knowledge of the language. He should understand the syntax and structure of the language and, in addition, should be versed in the auxiliary subjects of antiquities and literature, sufficient for the necessary illustration of his teaching. Eighteen hours must be taken before the student may be admitted to the training-courses. Twelve hours' work is required.

The official minimum requirement for the student who expects to teach geography is three years' work, three hours a week. This course includes a course in general geography covering the elements of mathematical geography, meteorology, and climatology, the land forms and the ocean, in which study the endeavor is made to go beyond the scope of these subjects as presented in any one of the leading textbooks. In addition to this, each student is required to make a special study in the course, of the origin and classification

of land forms, of the climate of the United States, and dynamical geology in the more advanced courses in the department of geology of Columbia University.

The minimum requirement should be supplemented by work in economics, geology, and advanced work in physiography.

XVII (*special*)

WILL THE SAME TRAINING IN THE NORMAL SCHOOL SERVE TO PREPARE THE TEACHER FOR BOTH ELEMEN- TARY AND HIGH-SCHOOL WORK?

JOHN R. KIRK, PRESIDENT OF STATE NORMAL SCHOOL KIRKSVILLE, MO.

I. GENERAL STATEMENT

1. It is unwise and wasteful to classify prospective teachers at the beginning of their professional preparation because they all have inherited traits and capabilities which should be the criteria for their differentiation into classes.

2. It requires two or three years of instruction, intermingled with experimentation, to determine what these qualities are.

3. From the nature of the case, two or three years in the normal school or teachers' college should be devoted to such general courses of instruction and experimentation as will reveal to the student what his talents are.

4. The final differentiation into elementary teachers and high-school teachers should probably take place during the fourth year in the normal school and in the teachers' college. Even then it is doubtful whether the two classes of teachers need to be separated very widely. Perhaps 90 per cent. of all the professional or technical instruction and preliminary experience in the preparation of teachers should be common to the two classes under consideration.

5. The most effective and practicable scheme in the preparation of all teachers furnishes academic and professional instruction side by side and in the later periods joins with these some constructive experience in teaching.

II. BASIC FACTS

Professional preparation for all teaching below the college is predetermined by the following facts:

1. Adolescence frequently begins pretty low down in the elementary school period and ends early in the high-school period. It sometimes begins late in the high-school period and continues beyond the time of high-school graduation.

2. As to aptitudes and disposition, children differ among themselves in the elementary school fully as much as they do in the high school.

3. Elementary-school children manifest in some degree practically all the traits and impulses discovered in high-school children.

4. The subjects in the curriculum (whether for elementary schools or high schools) are relatively simple and easy, while the children to be taught (whether in elementary school or high school) are infinitely varied and exceedingly hard to understand and direct.
5. Sound scholarship in the content of the school curriculum is essential. But it constitutes only part of the teachers' burden of thought and study. The paramount problem is the school child.

III. ARGUMENT

Training is a bad word for our purpose. It savors too much of studied imitation, of conscious repetition, and the exaltation of routine. It suggests the substitution of drilling for thinking. It signifies prescriptions and rules dictated by instructors and acquired by would-be teachers. The dog and pony show illustrates what can be done by training. The prospective teacher needs instruction and practice in constructive thinking more than he needs training. He needs frequently to apply and test his knowledge in concrete experience of his own. He needs direction and exercise in the use of his constructive ingenuity. Opportunities for application and test of his knowledge are many and varied. In the great cities the potency of mechanism stifles spontaneity and power of personal reaction. In the country at large there is much opportunity for wholesome professional growth thru practice which is not overdirected. This may be in practice schools, or thru substitute work in schools of villages and small cities, but, best of all, in rural schools.

The typical graduate of the normal school and of the teachers' college goes about his work in too large a degree conscious of rules and prescriptions learned by him while undergoing training. But he should be nearly unconscious of acquired methods. He should attack his work with his energies centered upon the curious, inquisitive, kaleidoscopic group of persons given him to teach or exploit. During his professional preparation his skill in adaptation and his creative imagination need stimulating to the utmost. By effort he should acquire the ability to lose himself in guiding the learner and in adapting knowledge to the use of the learner. There is something in all this infinitely better than the thing we call training.

The curriculum used in educating children is relatively simple and stable; but the children furnish a varying stream of thought and action exceedingly complex and difficult to comprehend. We count out a few hundred facts to be taught in the high school. We classify, tabulate, and label them. We give ample reference to bibliographies. Most of the high-school teachers have spent some years in college learning the contents of the curriculum. We permit them to make diagnoses off hand and administer the medicine with reckless unconcern. Our prescriptions are dealt out chiefly by the rule of cut and try. No one has attempted to classify, measure, and label the children of the high-school classes.

Custom compels the elementary teacher to learn the natural traits of

children and to appeal to the children thru things which are known to them. But custom allows the high-school teacher tolerably free rein to follow his tastes and inclinations. Hence he usually patterns after those who taught him. With somewhat better scholastic acquirements than the elementary teacher has, he is frequently a narrower person, living more within his limited specialties, and teaching subjects, not persons. He is sometimes woefully ignorant of the child to be taught.

We are not likely to make progress, excepting in spots, until some parts of our educational creed are reconstructed. One of them innocently promulgated from the circles of higher education is to the effect that a half-educated person is good enough to teach children up to and including the last day in the elementary school, while a fully educated person is needed to take charge of the child on the next day in school, i. e., the first day in the high school. By this tenet the typical normal school graduate with insufficient academic attainments and much dogma stands for the half-educated person, while the university graduate crammed and surfeited with ill-digested facts and theories acquired in college lecture rooms represents the fully educated person. This creed is convenient and practical. It is more easily lived up to than a better creed would be. It is damaging to all education.

I think we should repudiate these invidious discriminations, for if anyone needs a college education it is the teacher who guides the children thru the varied subjects used in the grammar-school grades. If anyone needs critical and available knowledge of human nature in the uncertain period of childhood and the stormy stages of adolescence it is the teacher of the high-school child.

Most of the normal schools offer limited courses which high-school graduates finish in two years. This custom precludes separation of students with a view to preparing them for different kinds of service, because it is impossible in so short a time to differentiate and test the students sufficiently to determine the kind of teaching to which they are severally adapted. Out of a lot of two-year-old colts a horse-trainer, judging from structure, may select the trotting horse or the roadster or the one to pull the beer wagon; but we cannot so classify prospective teachers. One professor of education in a great university informs me that the girls entering his department have already decided to be high-school teachers. There is an educational caste in his state. He says the graduates of his department would be humiliated were they required to teach in elementary schools; but some of these prospective teachers are by nature and acquired traits adapted to the work of primary teachers and nothing else; others among them are versatile, forceful persons, adapted to the varied life of the grammar-school teacher and wholly unfit for the confining specialties of secondary education. But it requires many months of time to classify these persons and so direct their study and work that no part of their professional lives shall be wasted. It therefore seems clear that a teachers' college or normal school offering such a short cut to professional life as a two

years' course should devote itself to general courses of instruction and practice, leaving final differentiation to be determined after graduation.

But some normal schools offer academic courses covering the college curriculum, about two-thirds of the student's energy being devoted to academic subjects; about one-third, to professional preparation. Such schools offer special courses for the different classes of teachers. But they find that a very large part of all that the elementary teacher should know is needed also by the high-school teacher and vice versa. They find that the high-school teacher should not be ignorant of the phases of life in elementary schools; for it is impossible to guide with certainty the high-school student if the teacher is ignorant of the preliminary stages thru which the student must have come. As an illustration, suppose a would-be teacher detaches himself from ordinary family life for a period of five or six years and isolates himself in university life to delve in knowledge and perchance to write a hundred letters for research material out of which to make a thesis. Will he not certainly get out of sympathy with the ways of child-life? Is it not clear that he will have to serve an expensive apprenticeship in order to reinstate himself in the ideals of child-life? Must he not learn by wasteful experiment to interpret the inherited and acquired qualities in the victims of his empiricism?

The facts seem to show unmistakably the unsoundness of the doctrine that a child may at one time have for his teacher a sensible, practical, resourceful person of meager academic attainments and at another time a teacher of deep scholarship in a few specialties and dense ignorance in more vital things. And surely the typical normal school should stand for better scholarship in its graduates; but the university should remove the strong hand with which it clutches the high-school teaching corps. The normal school should look into and master the requirements of high-school instruction. The university should have a higher conception of the preparation of all teachers. It should be as close to the elementary school as to the high school. The university now stands for knowledge as against processes in teaching. It should go to the very foundations of that knowledge which appertains to the capabilities, inclinations, inheritances, and possibilities of the child and the youth to be taught.

This paper presents no specifics, devices, schemes, or mechanisms for preparing high-school teachers. It seeks to make clear some conceptions of life in education which ought to be wrought into the constitution of every would-be teacher.

The school child from six to twenty is a child thru all his years of schooling. He is the product of forces preceding him. His inheritances and experiences make him what he is. Without knowledge of these potencies his teacher cannot with certainty direct his energies.

We have a somewhat top-heavy high-school curriculum. Higher education provides for that and sends out peripatetic pedagogs to enforce its dicta. The typical high-school teacher lacks sympathy for and insight into the transi-

tion period of growing high-school children, too many of whom suffer with mental dyspepsia, being loaded with undigested and indigestible food for the mind. Fresh green graduates in the rôle of teachers are driving out our restless boys from the high schools. Girls being used to the cramping effect of conventionalities, cannot be driven from school by empiricism, tyranny, or routine. Yet they suffer much.

To meet the conditions teachers will have to be so prepared as to know the background below the plane of consciousness in the high-school child and to see how things must look to him. They will have to be capable of worrying over his habits and deeds. They will have to be able to discover the avenues to his consciousness. By instruction and trial they will be obliged to learn how to reach his consciousness thru its content in order to direct energy in the mastery of things outside that content. They have no right to invade classrooms with masses of knowledge all formulated and ready to transfer to the consciousness of the high-school child regardless of his previous knowledge and experience.

Each boy lives in a world of concrete tangible things. These constitute the soil in which to sow. But first they have to be discovered so that we may start the boy from things known to him in his work and play. Conceptions of grammar are nearly impossible to some sensible boys because they have no kindred ideas to compare it with.

This paper, therefore, ventures to suggest some mental states or attitudes with which efficient teachers by instruction or experience grow familiar. These states or attitudes need not be known in any particular form; but their recognition, study, and use become part of the conscious or unconscious habit of every efficient teacher in every school. Among these may be mentioned the following:

1. The non-receptive or unimpressible state of mind. Students at times do not hear what is said to them. Tho respectful in bodily attitude their minds seem inactive or non-receptive. At other times they are wakeful, attentive, thoughtful, in *receptive attitude*. Many of them are non-receptive because the only existing avenues to their consciousness are ignored. The inattention of children is usually not their fault. It is just a part of themselves. No two are reached equally well at the same time thru the same avenues to their consciousness. Each child has a mass of concrete personal experiences thru which he hears and sees. He is receptive when approached thru these experiences. When not so approached he is non-receptive. Skilful and sympathetic teachers never proceed without believing that those to be taught are in receptive attitude. And it is for prospective teachers thru instruction and experiment to gain insight into varied human nature so that they may with certainty secure this attitude even from the most indifferent students.

2. Thru the *recitative attitude* we secure expression of the simplest kind of mental reaction. This attitude does not imply much thinking. It does not require much. It implies receptivity and just enough of mental reaction

to reproduce forms spoken or otherwise delivered or assigned by teachers. From primary school to college typical lesson assignments presuppose that lessons are to be looked at or heard and reproduced to the teacher in the way he wants them delivered to him. And, altho the recitative attitude signifies poor teaching and vague conceptions of the teacher's relation to the one taught, it is still the pedagogue's mainstay, his stock in trade, his source of greatest pride. To lead young teachers to use it effectively and yet to realize its utter inadequacy by itself is one of the hardest and longest tasks in the preparation of all teachers.

3. The *reiterative attitude* is the recitative with concentration a little prolonged. It is based upon good receptivity. But the reciter in this attitude is unduly conscious of the forms of expression. He lacks spontaneity. When started on a paragraph or a page which he is to reiterate, he is like a boy coasting; it is disagreeable to be upset. He can't get another good start without returning to the point of departure. But I have visited many high-school teachers and college professors who rely chiefly upon the reiterative attitude and glow with enthusiasm when a poor parrot of a child can repeat, perchance in his own words, a long paragraph or a long lesson.

4. Without a generation of college professors who know good teaching and practice it, the preparation of high-school teachers can never succeed very well. So often the professor says to his students: "Read the book and get the author's thought;" or, "Listen to me and get my thought." But reading is not getting another person's thought. Reading is thinking; and hearing-language is thinking. So long as teachers and pupils meet chiefly for recitation their thinking is of a low type. Infinitely better than reciting and reiterating is cogitating. Every true teacher secures from each one taught the *cogitative attitude* of mind. But the typical professor dislikes to be interrupted in his lectures. He desires students to hear and reproduce "in substance" what he says. He seems not to know that hearing-language and observing and reading are all thinking processes requiring continuously the cogitative attitude of the mind. He is too commonly a recitationist; but he influences tremendously the high-school teachers. They follow his ways. His apparent purpose is to produce reciters rather than thinkers. He thinks and formulates for them. They recite after him. How delightful it is to run across those rare ones among us who are skilful in having students work out and think out and formulate subject-matter with them.

It is for normal schools and teachers' colleges to recast a great part of the current conception of the teacher's function and by a large variety of teaching experiments to bring all prospective teachers into a condition of constant eagerness to teach skilfully thru utilization of the ever-varying attitudes of those to be taught.

5-7. The *inquisitive*, *skeptical*, and *critical attitudes* of mind are suppressed in a large proportion of high-school and college classes. The typical recitation hearer does not enjoy them. They savor too much of disrespect for his

dogmatism. They throw him off his beaten track. They disturb his habit as a recitationist. They dislocate the adjustment of his oft-repeated story. They are too much like common life outside the school; they turn the mind from form to content. They lead toward definite questions, answers, arguments, and conclusions. They force issues to finalities. They are the delight of the full-fledged artist teacher in every school of every kind.

8. Another characteristic of good teaching is the *combative* or disputative mental *attitude* which implies living together as student and teacher and struggling with one another in friendly combat. In this attitude the student would not hurt the teacher's feelings; the teacher would not play boss or dogmatist, both student and teacher delight in courteously making unlooked-for interpretation of things, teacher and student live together in subjects, work out things together, indulge in sparkling, friendly cross fire, and welcome witty retorts made in good temper. But how can normal schools and teachers' colleges prepare teachers to skilfully utilize this state of mind? Partly, perhaps, by instruction, but more by exemplifying it thru companionship with students in classrooms while teaching classes in the ordinary academic subjects. And the college professor should give us a square deal and do his share.

9. The *discursive* or argumentative *attitude* of the mind is better still. As a school inspector I many times longed to discover some difference of opinion between the high-school teacher and his students. The peaceful, monotonous harmony which commonly prevails in the high-school classes, means low mental vitality and wasted opportunities. It marks long and slow growth into habitual credulity. Where the critical, honestly skeptical, inquisitive, cogitative attitudes are utilized, the many persons taught see and think of many things which the one person who teaches cannot see or think of. Frank and honest exchange of ideas as to how things look does not mean waste. It means joint action and larger thought product. It means divided responsibilities and definite conclusions. It does not mean opinions formed by teacher and taught to students. It means conclusions that stick forever because they are worked out in the friendly competition of many persons, each one's notion being tested by the criticism of many others.

10. Best of all is the constructively *synthetical attitude*. It is seldom found in the typical high-school recitation. It is sometimes found in the grammar-school grades where alert, well-taught, masterful teachers dare allow their pupils to think for themselves, to struggle with subject-matter, to sum up or build up conclusions and declare where they are, how far they have come, and what they anticipate in view of the mental structures already erected.

This list of attitudes is illustrative, not exhaustive. The typical normal school delivers recipes and prescriptions for doing things. The teachers' college in the university is perhaps a little worse; it quotes from a larger bibliography. Both normal schools and teachers' colleges are consuming their best energies learning and reciting what some one has thought and formulated. But the poorest thing by which we deceive ourselves is the mechan-

ism called the recitation. It assumes the student to be a reflecting machine to receive and return ideas and impressions. Professors who rely chiefly upon the lecture, the "quiz," and the "exam" seldom appreciate any process above the recitative. They assume receptivity. They are satisfied to receive back the content of talks and textbooks. When, by repression and bodily inaction, students lapse into somnolent torpidity, then inefficiency finds relief in notebooks. Voluminous copies of profoundly obscure lectures are kept. Bodily action in note-taking keeps awake the students of many an inefficient professor. There is fatal sequence. Stenographers copy into notebooks what speakers say, put aside notebooks feeling free from worry of cogitation, and later on reproduce from notes exactly what was uttered. In like manner the pedagog substitutes transmission for cogitation, obstructs thinking, prevents face to face contact with living teacher and snatches away opportunity to comprehend and assimilate subject-matter while fresh and new.

"Quiz" follows lecture, further disguising professional unfitness. "Quizzing" is not teaching. "Quizzing" narrows thinking of many into channels of one. The "exam" concludes the hampering process. Much lecturing and "quizzing" call for much examining because teacher is ignorant of student's mental content and attitude. But lecture, "quiz," and "exam" are the stock in trade of many a friend of ours who never dreams of cogitating, analyzing, questioning, arguing, and working out with students the subject-matter to be dealt with, digested, and assimilated.

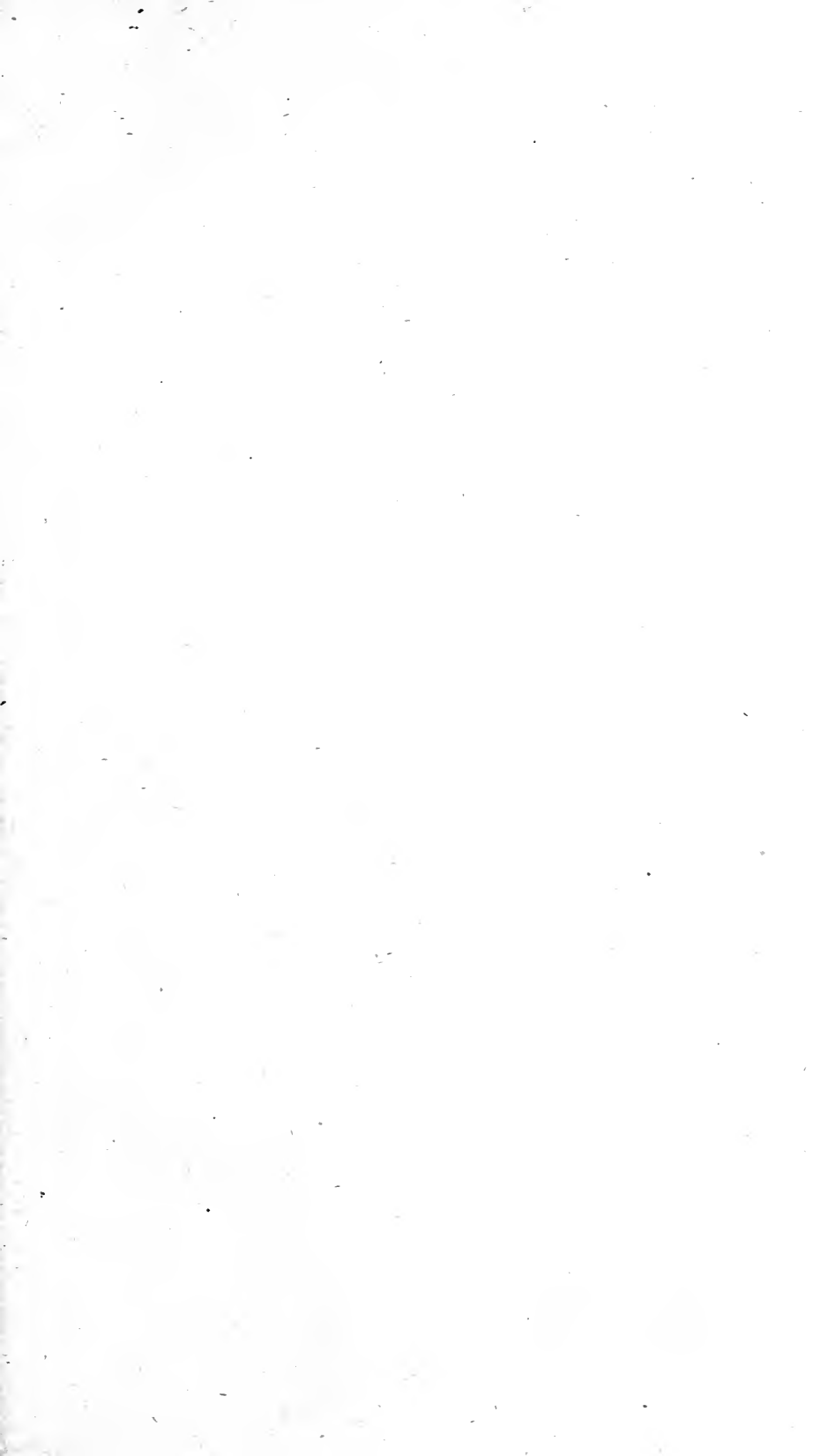
IV. CONCLUSION

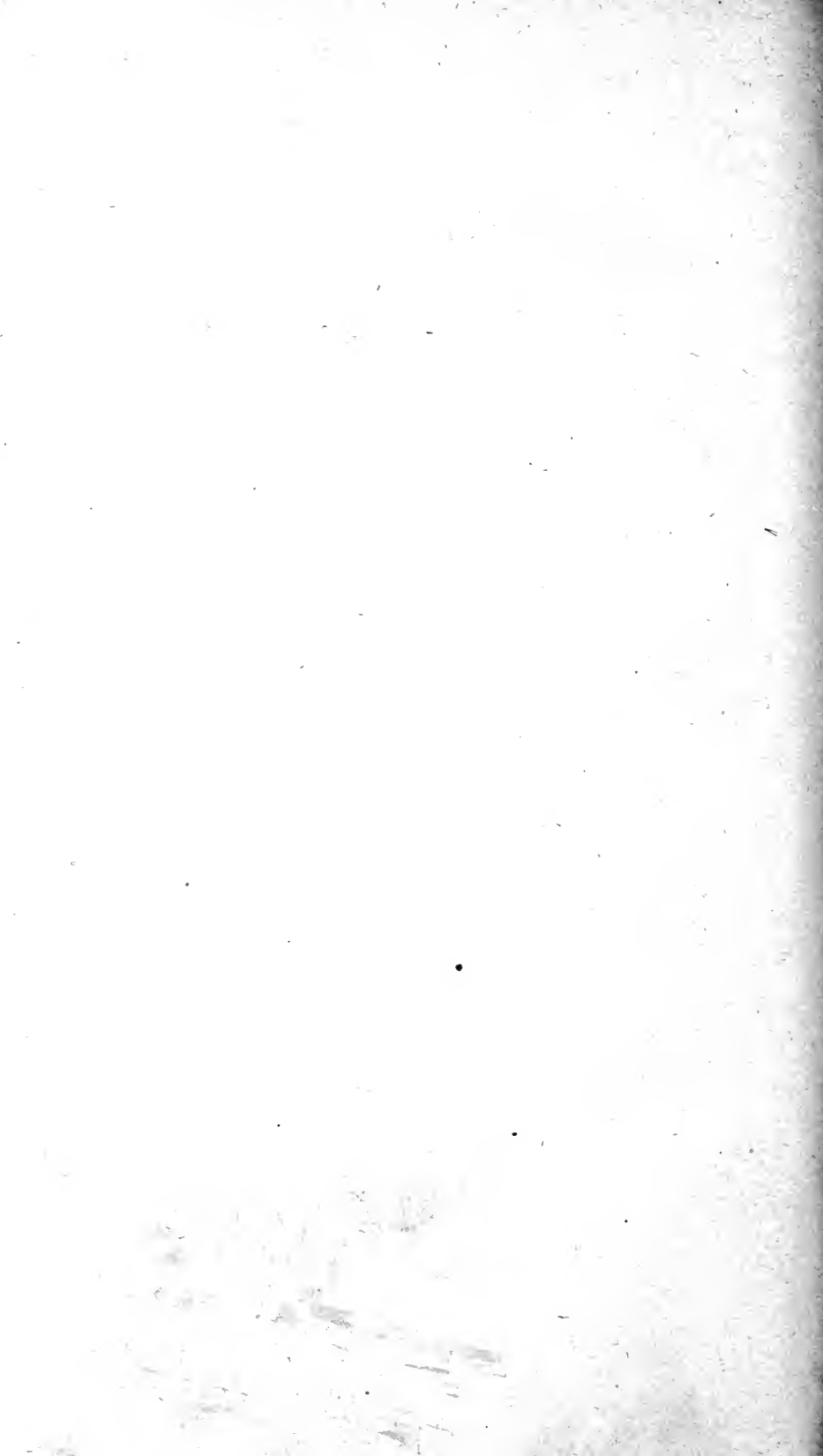
All teachers during their professional preparation need in common:

1. To secure by instruction and experience a working knowledge of childhood and adolescence.
2. To acquire in teaching the habit of basing daily instruction on the learner's mental content and attitude in order to modify both his content and his attitude and accustom him to the habitual and independent reorganization of his mental content.
3. By trial in many phases of experimental teaching they need severally to discover themselves and what their several talents are, and in view of their talents inherited and acquired, what they are severally destined to do best.

To do all this will consume by far the greater part of the time and energy which teachers can devote to initial preparation.

Probably one-tenth of the labor in the professional preparation of teachers should be devoted to special pedagogical aspects of subjects to be taught. In these special aspects high-school teachers and elementary teachers, after differentiation and near the end of their professional preparation need separate instruction in such things as bibliographies, appliances, and the correlation of each separate subject with other parts of the curriculum.





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